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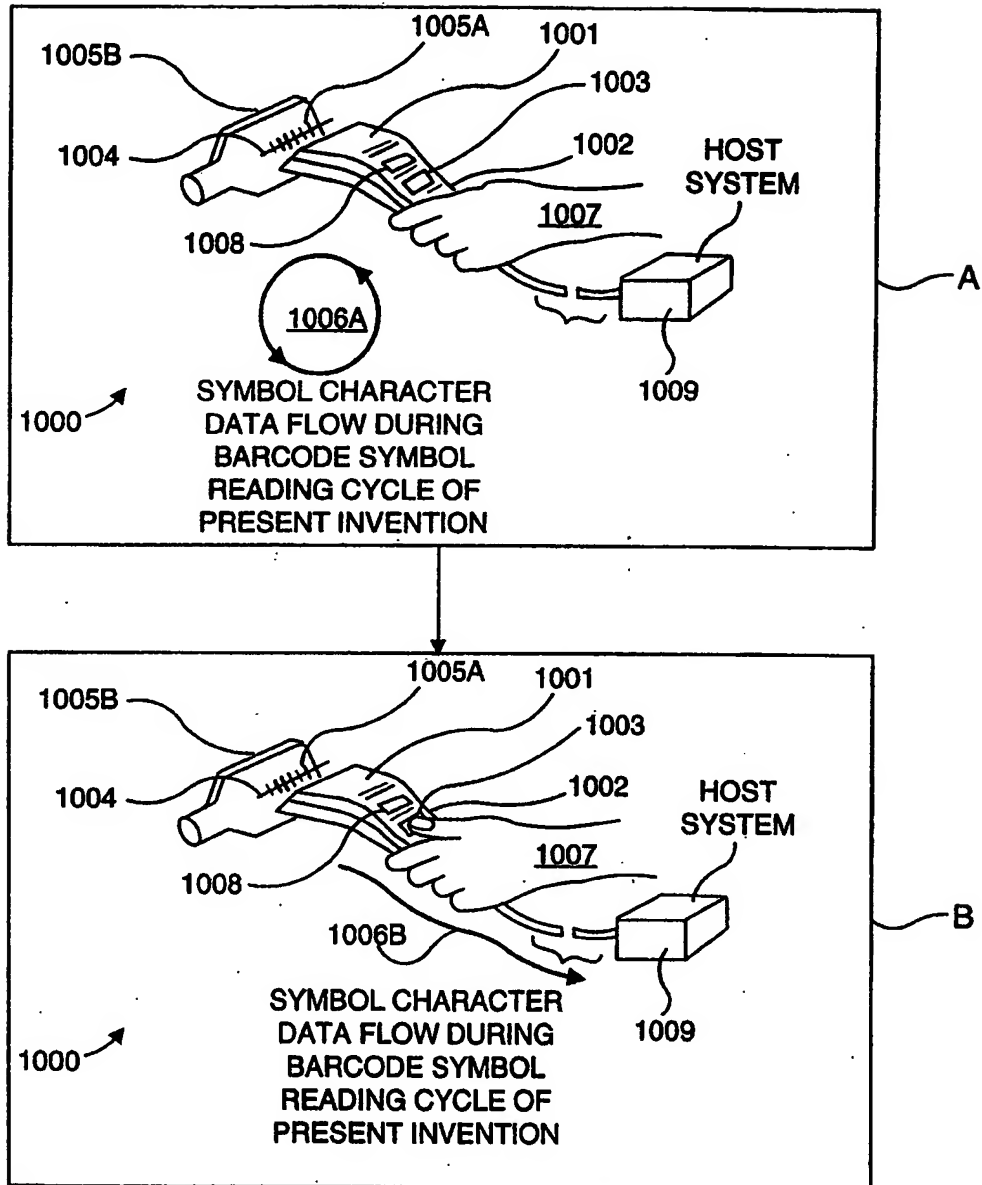
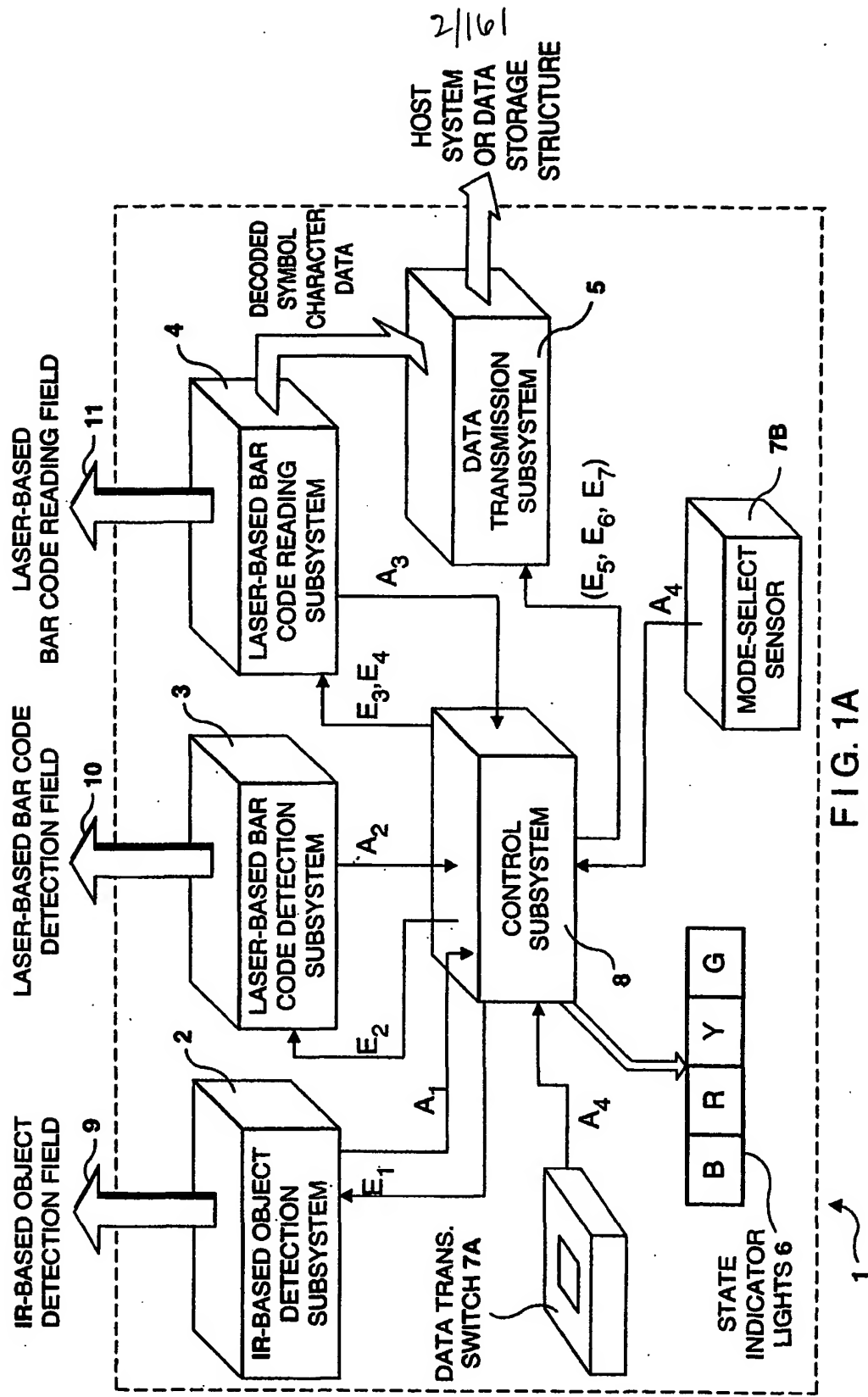


FIG. 1



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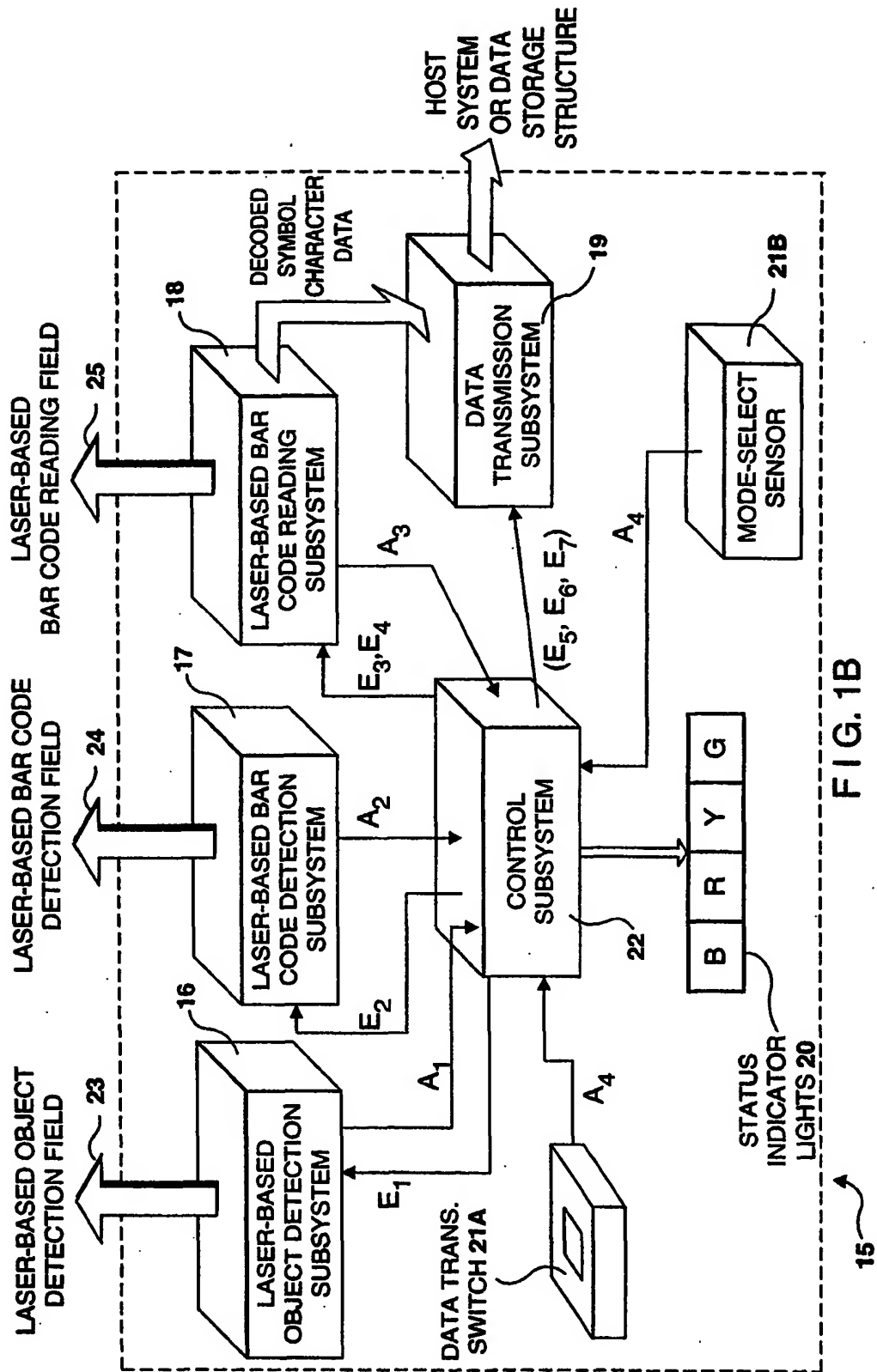


FIG. 1B

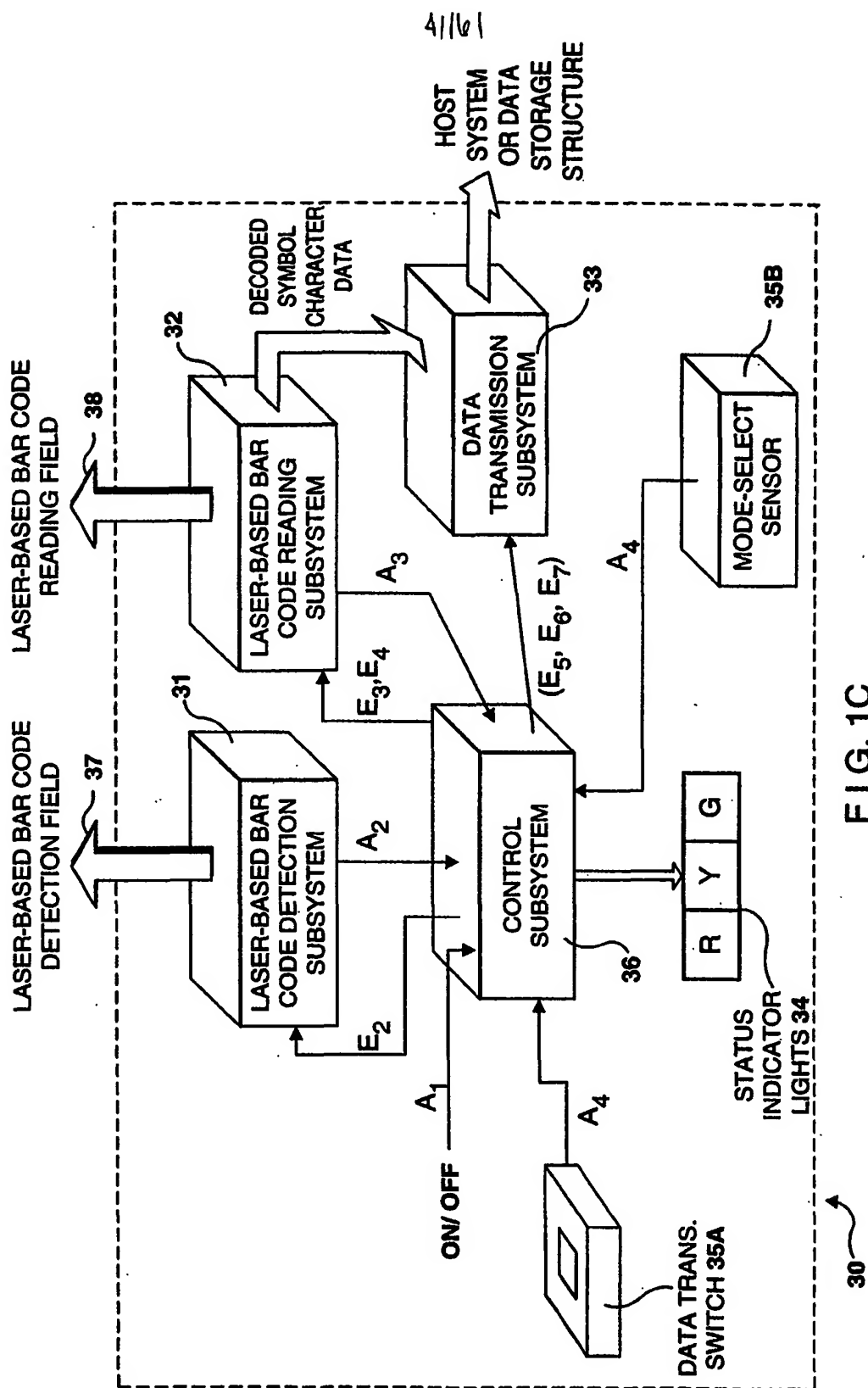
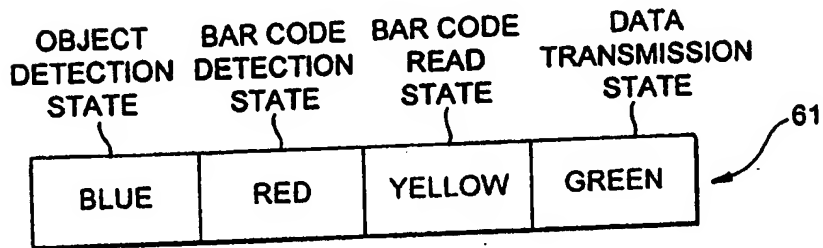
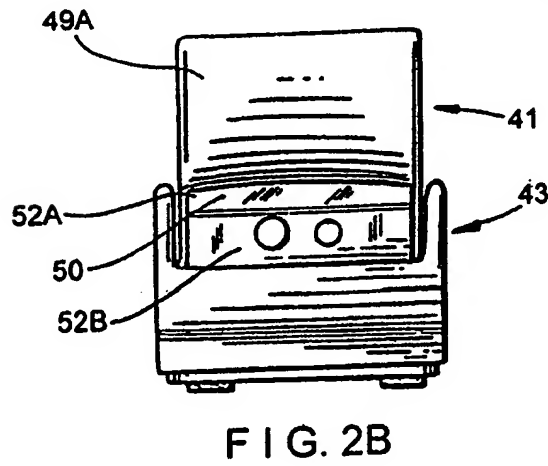
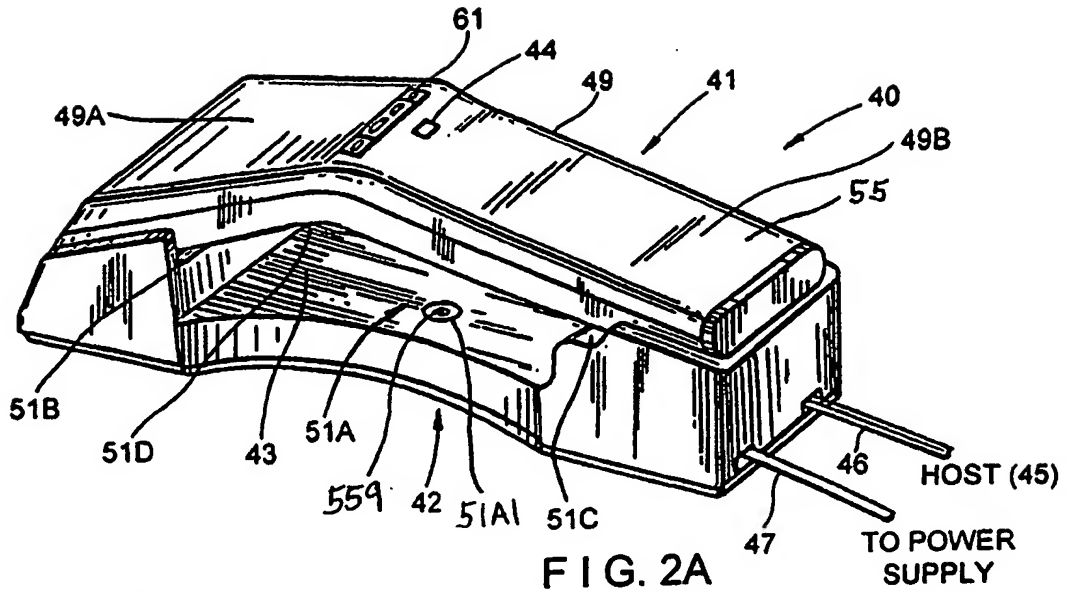


FIG. 1C

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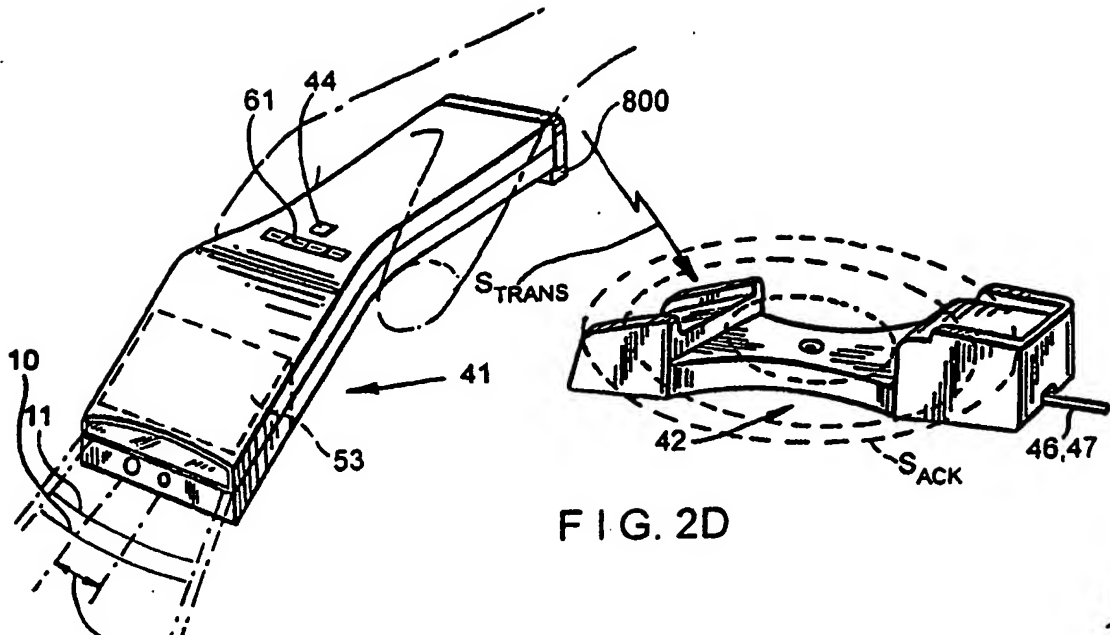


FIG. 2D

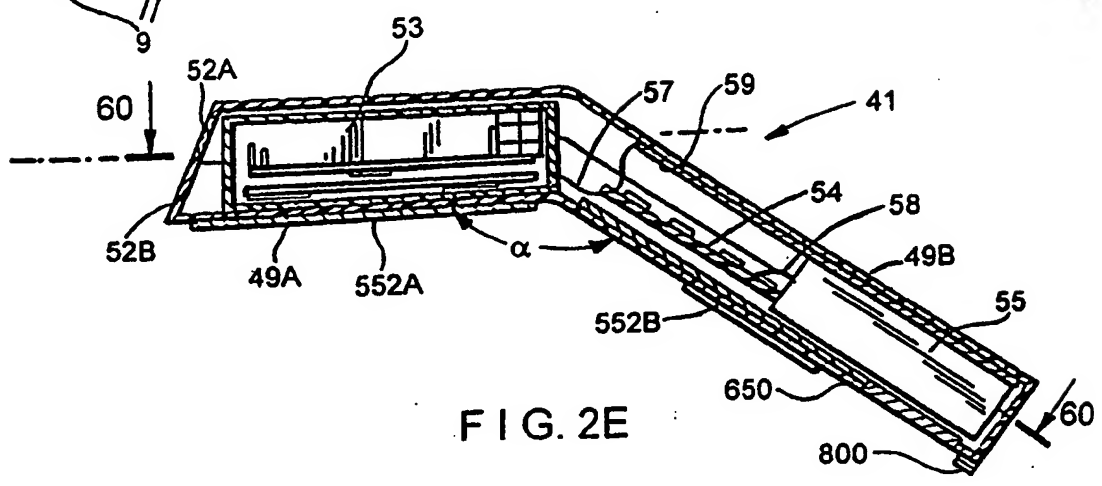


FIG. 2E

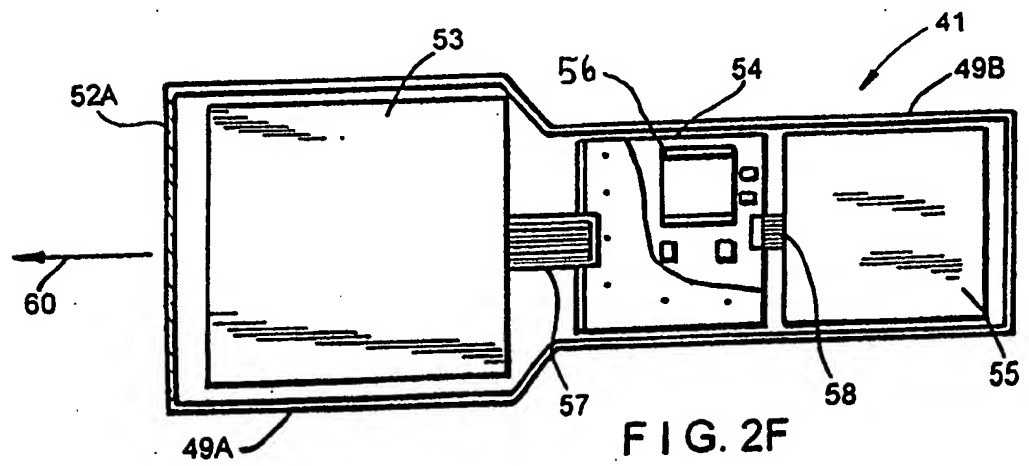


FIG. 2F

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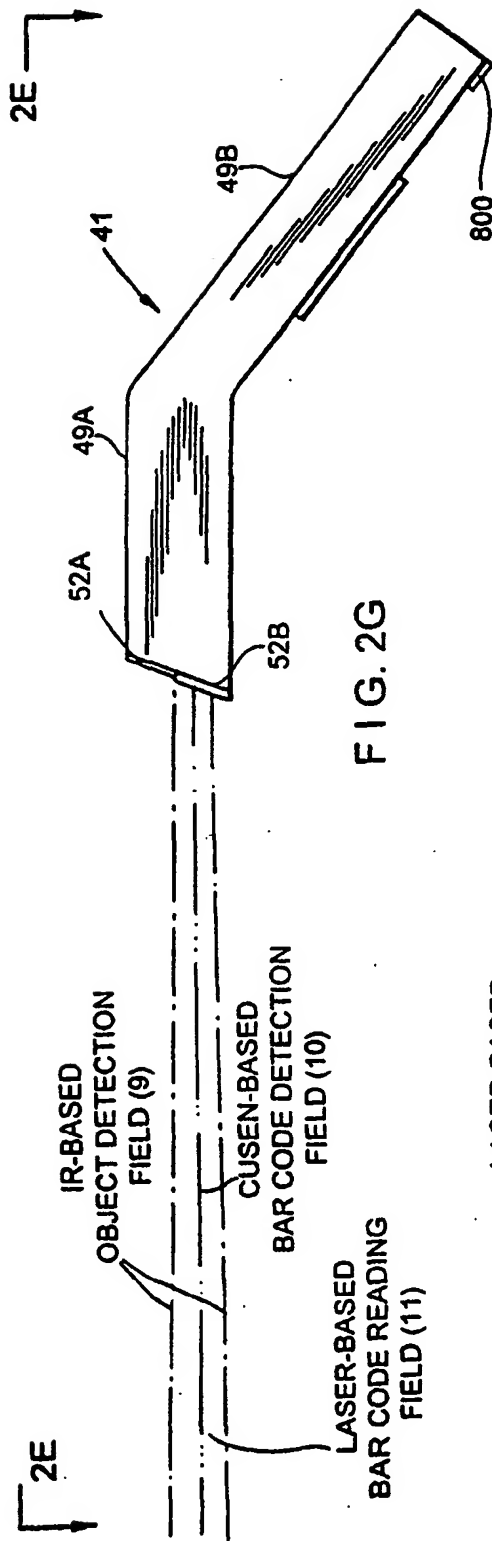


FIG. 2G

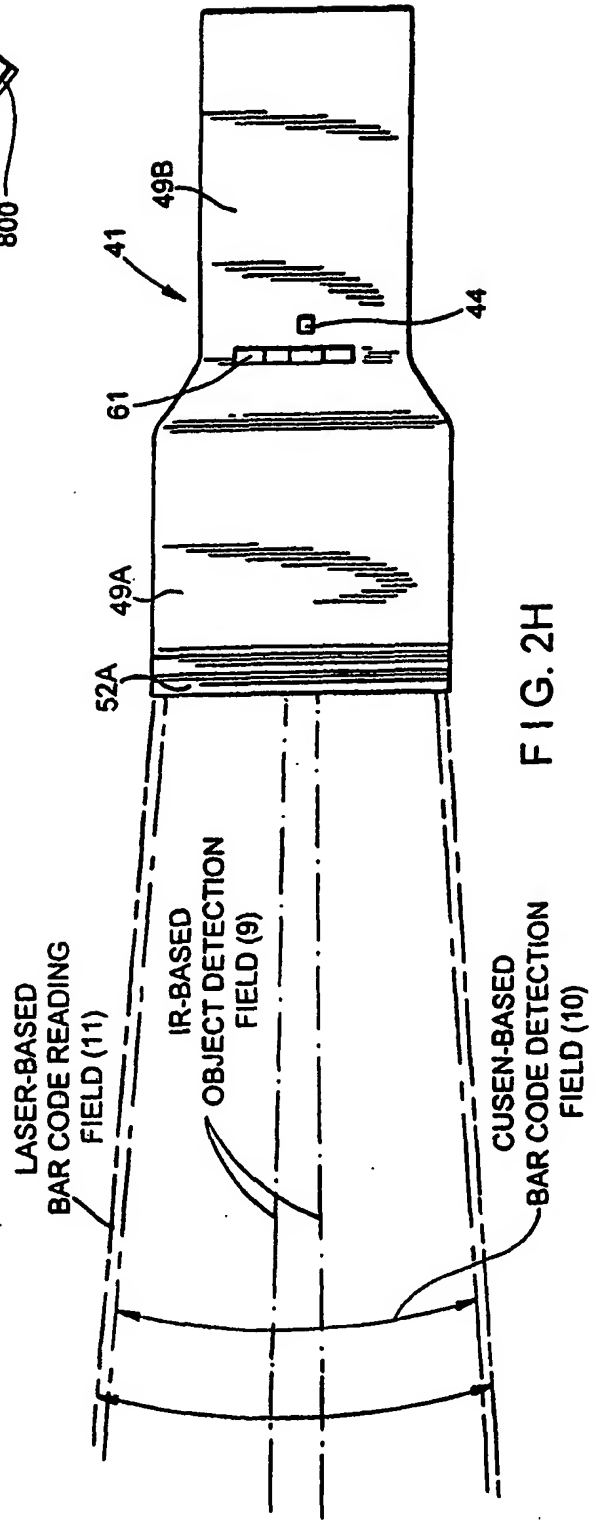


FIG. 2H

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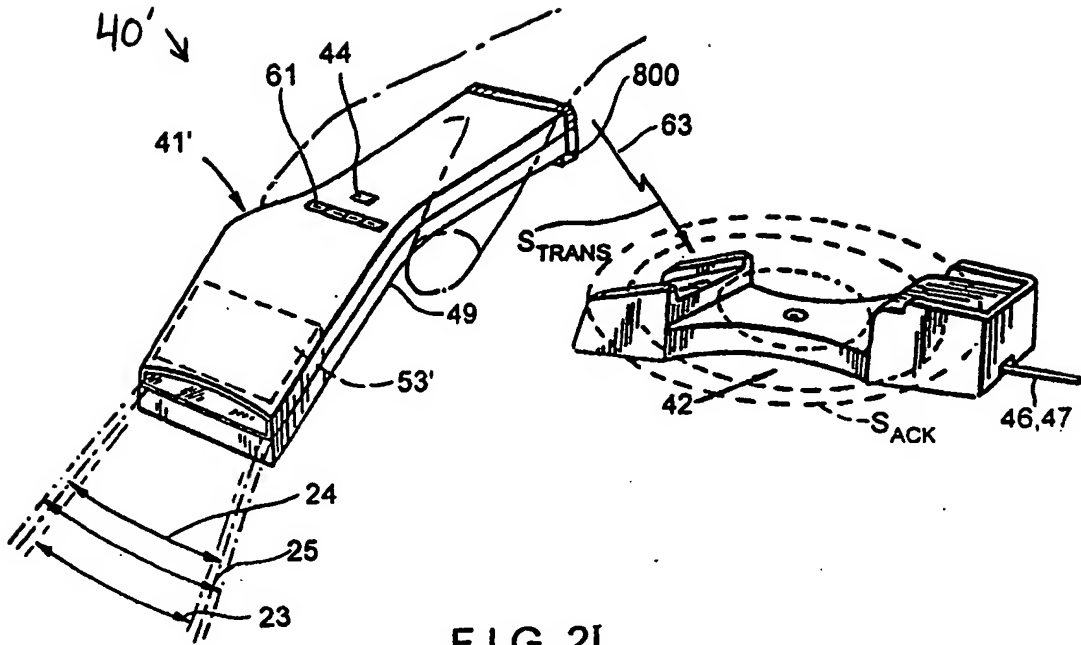


FIG. 2I

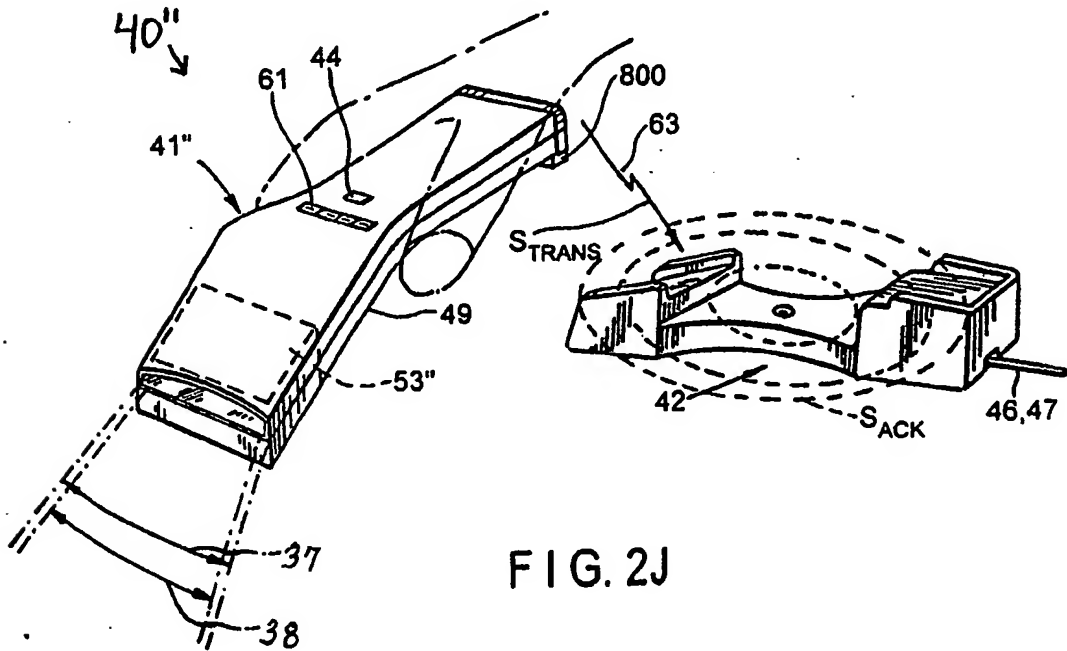
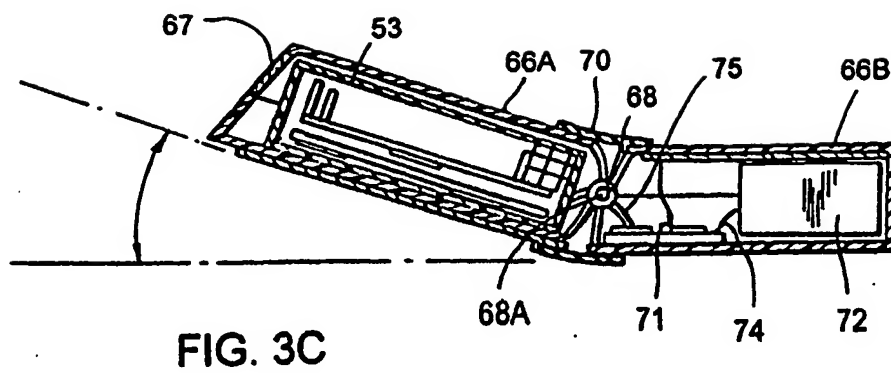
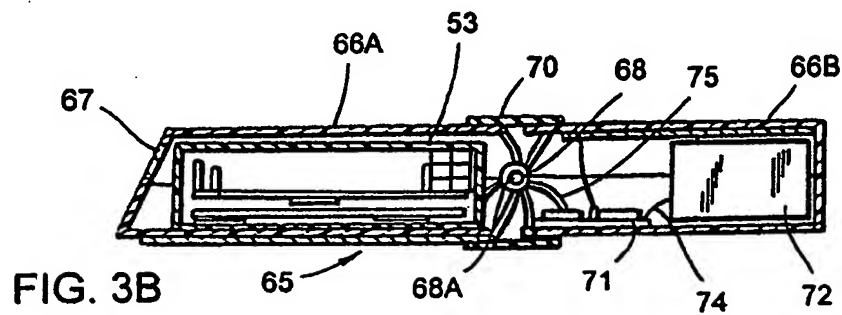
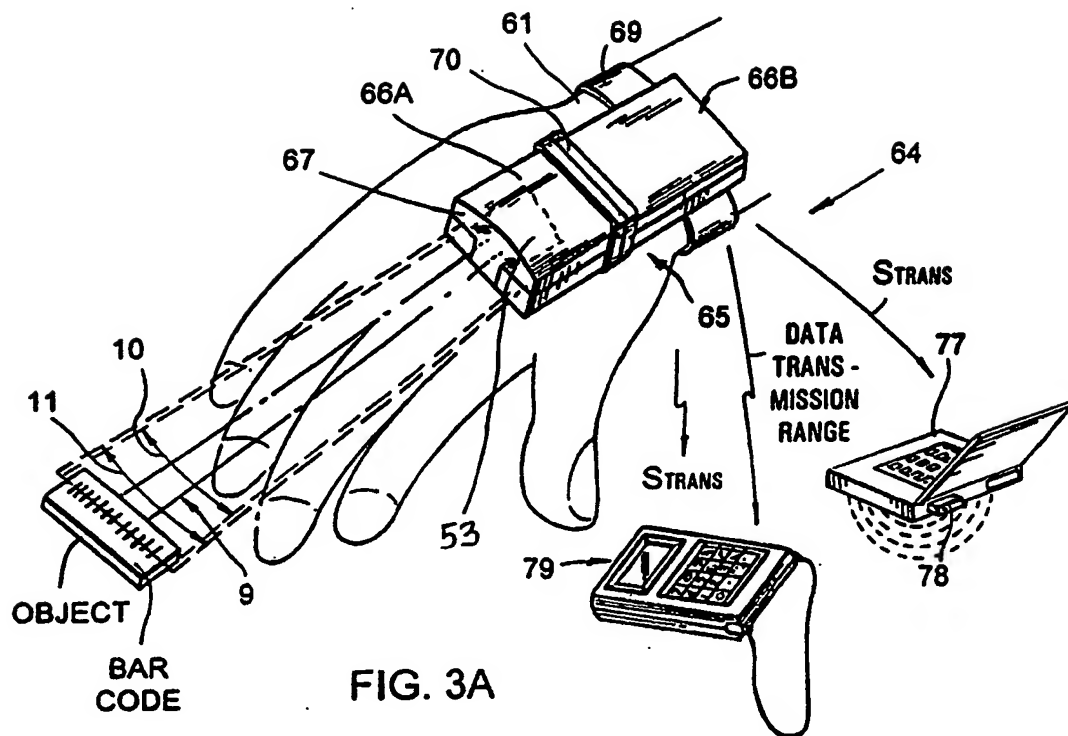
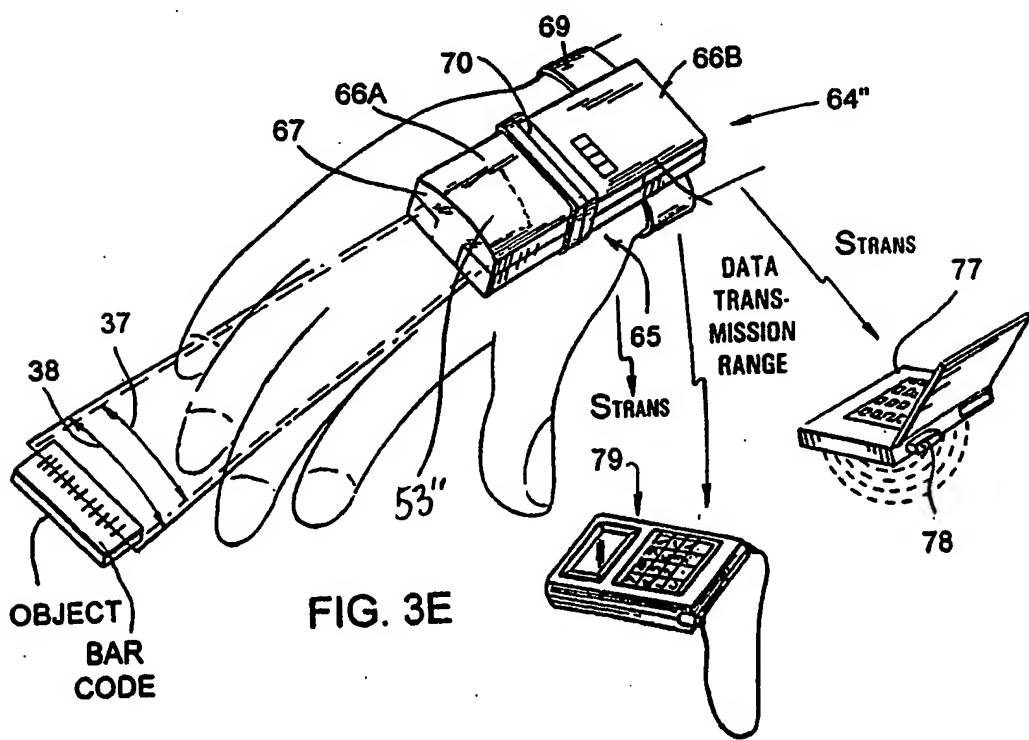
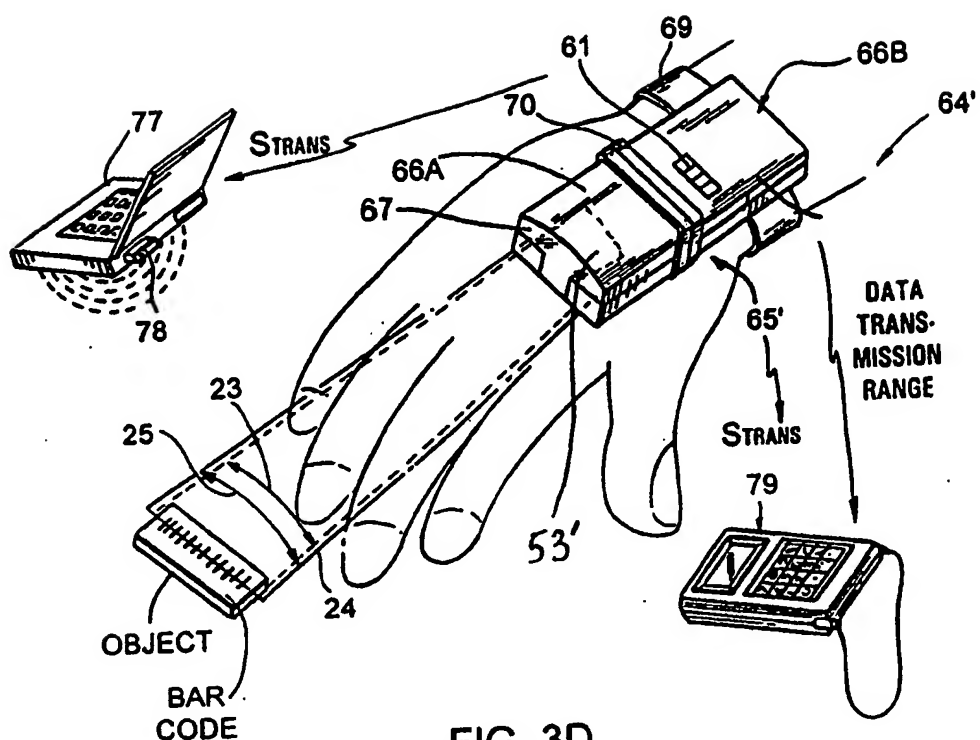


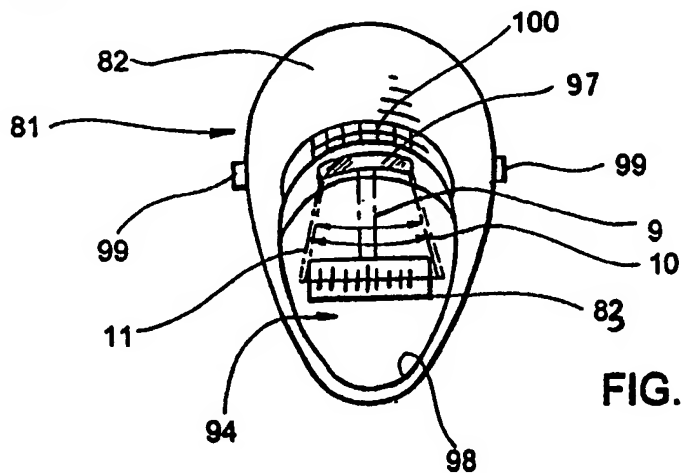
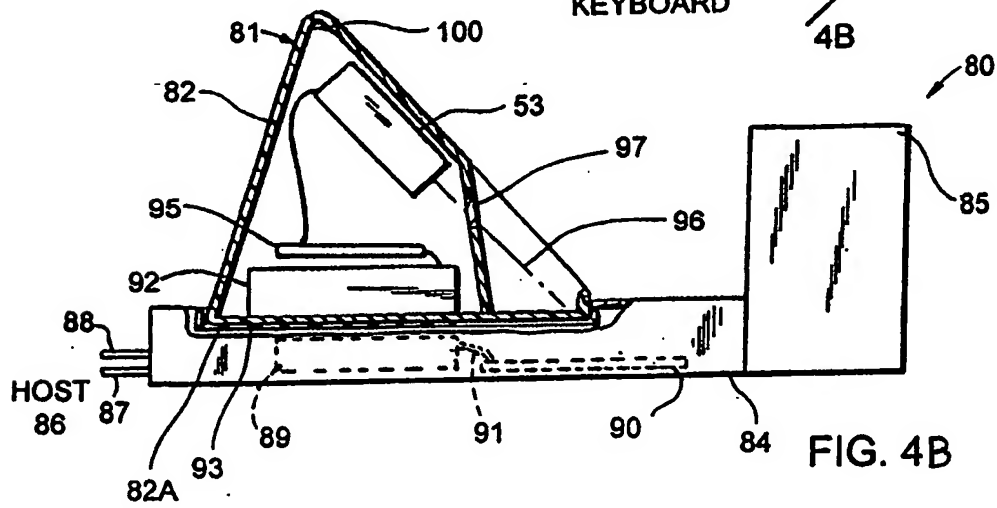
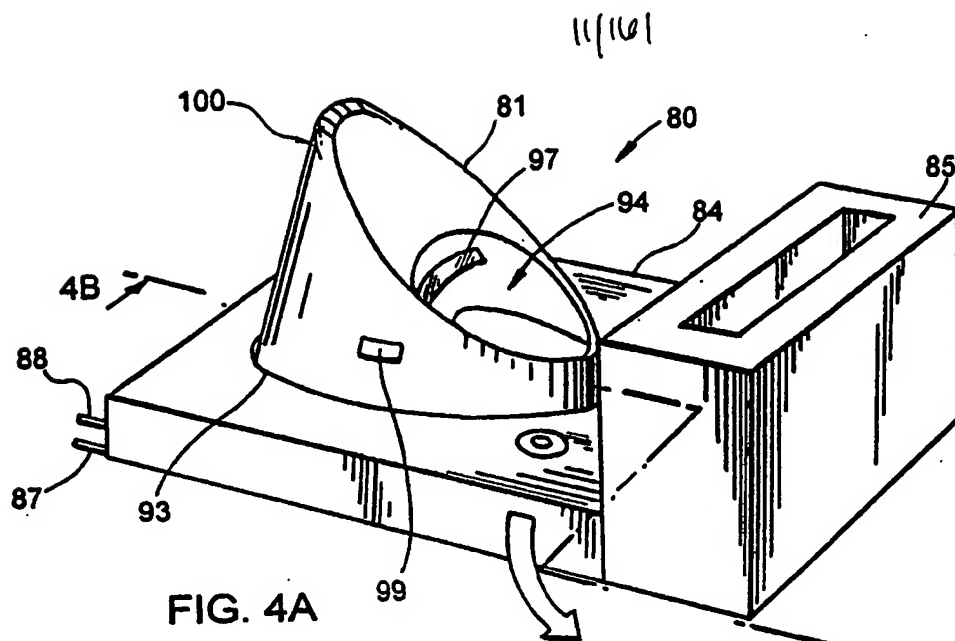
FIG. 2J

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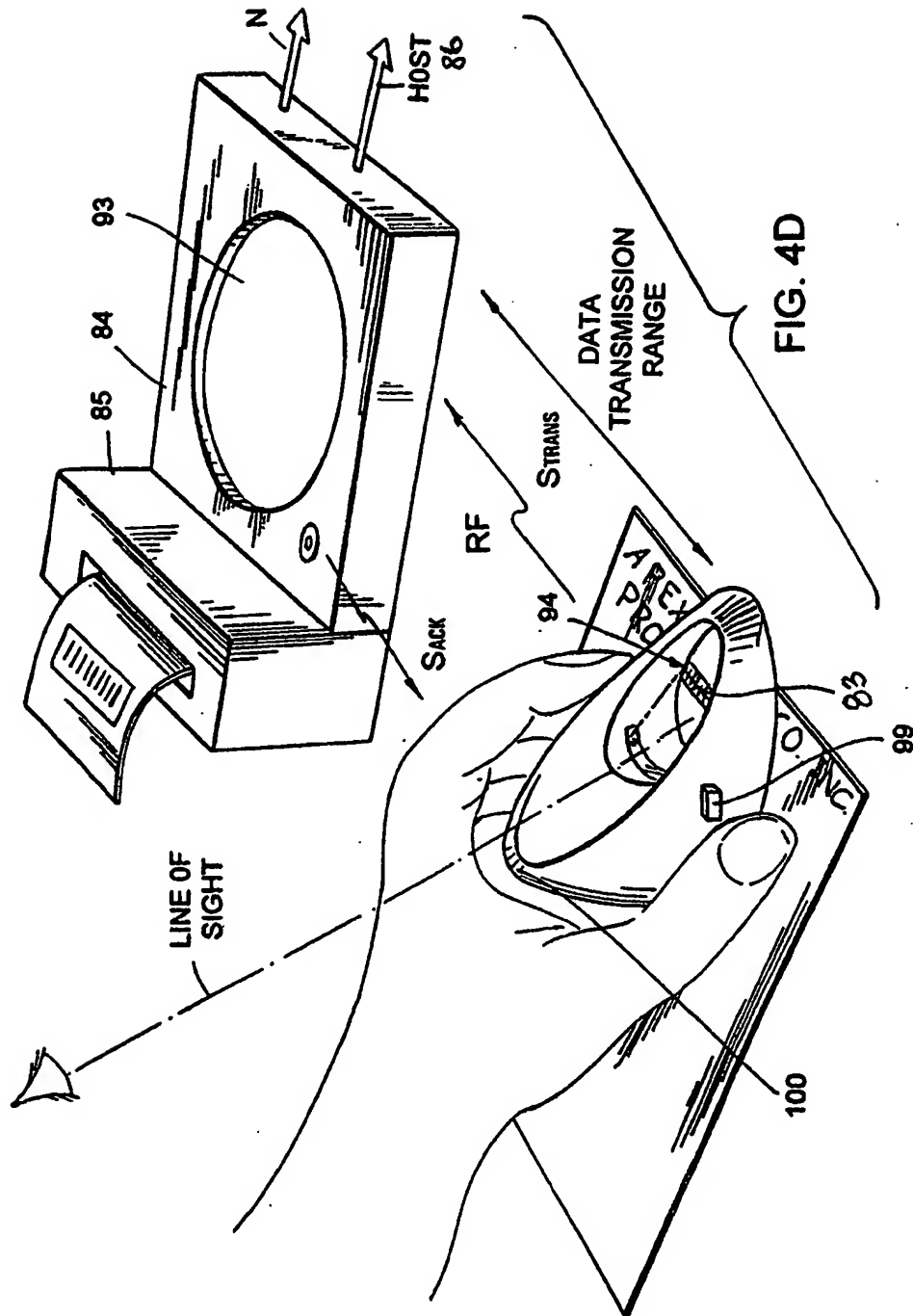


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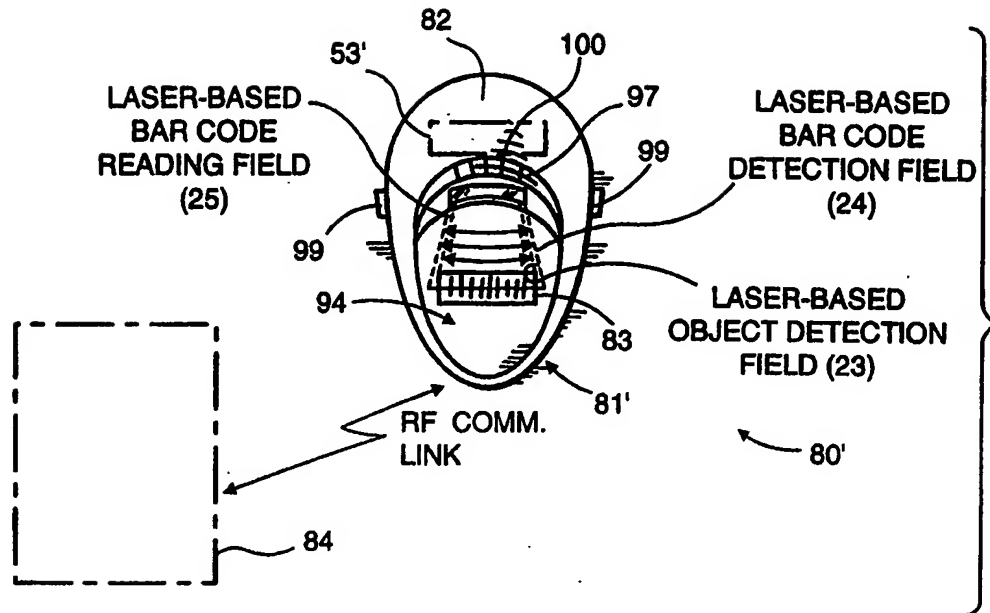


FIG. 4E

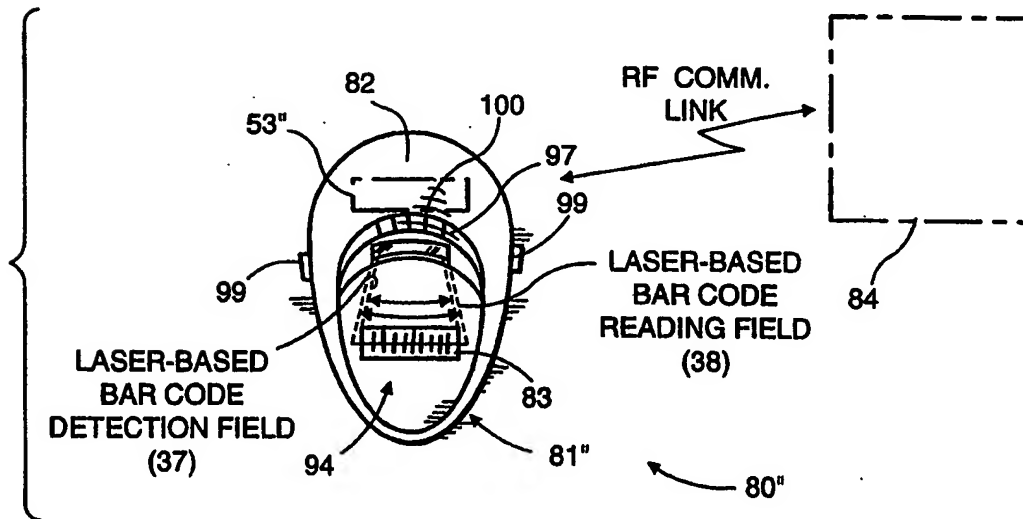


FIG. 4F

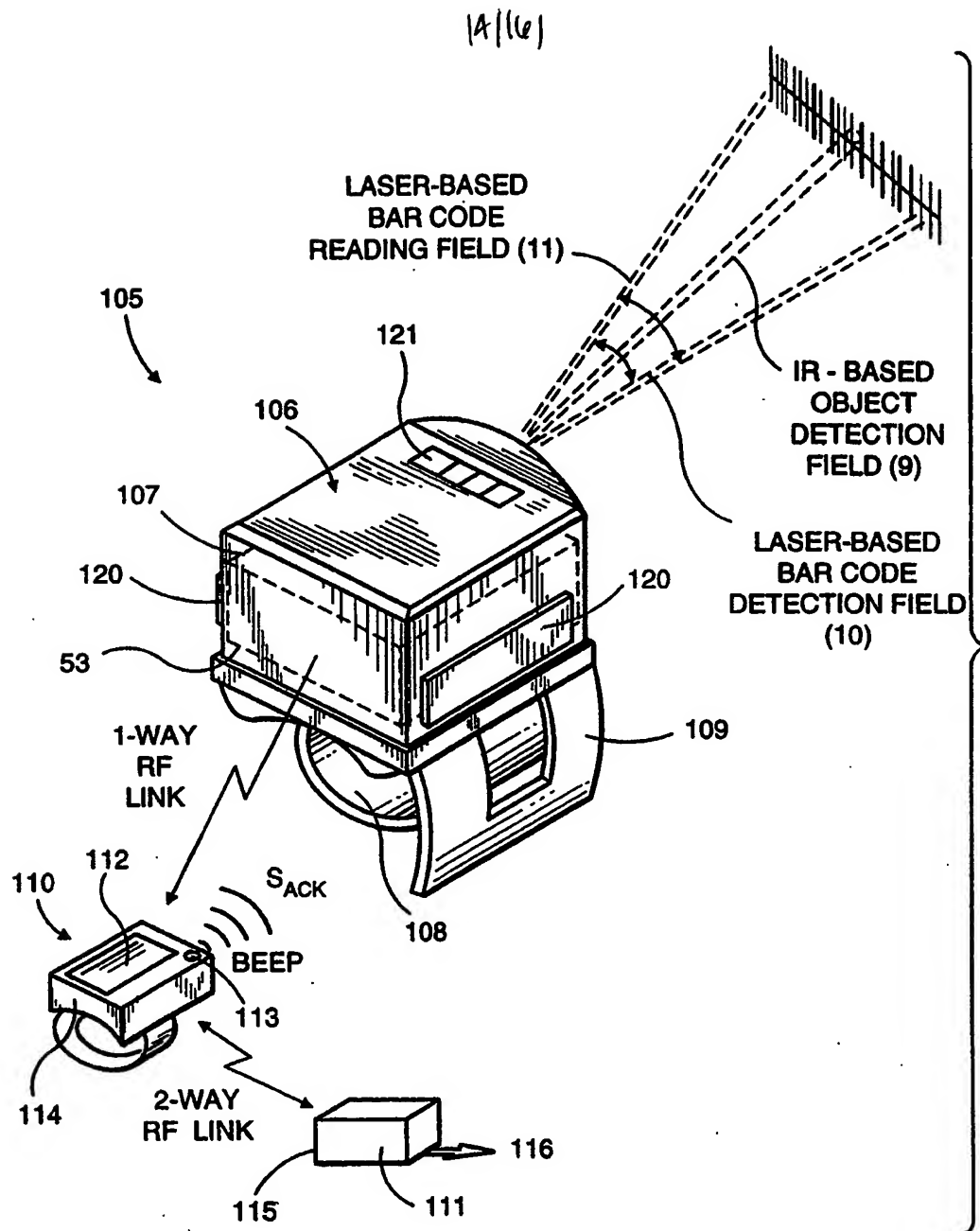


FIG. 5A

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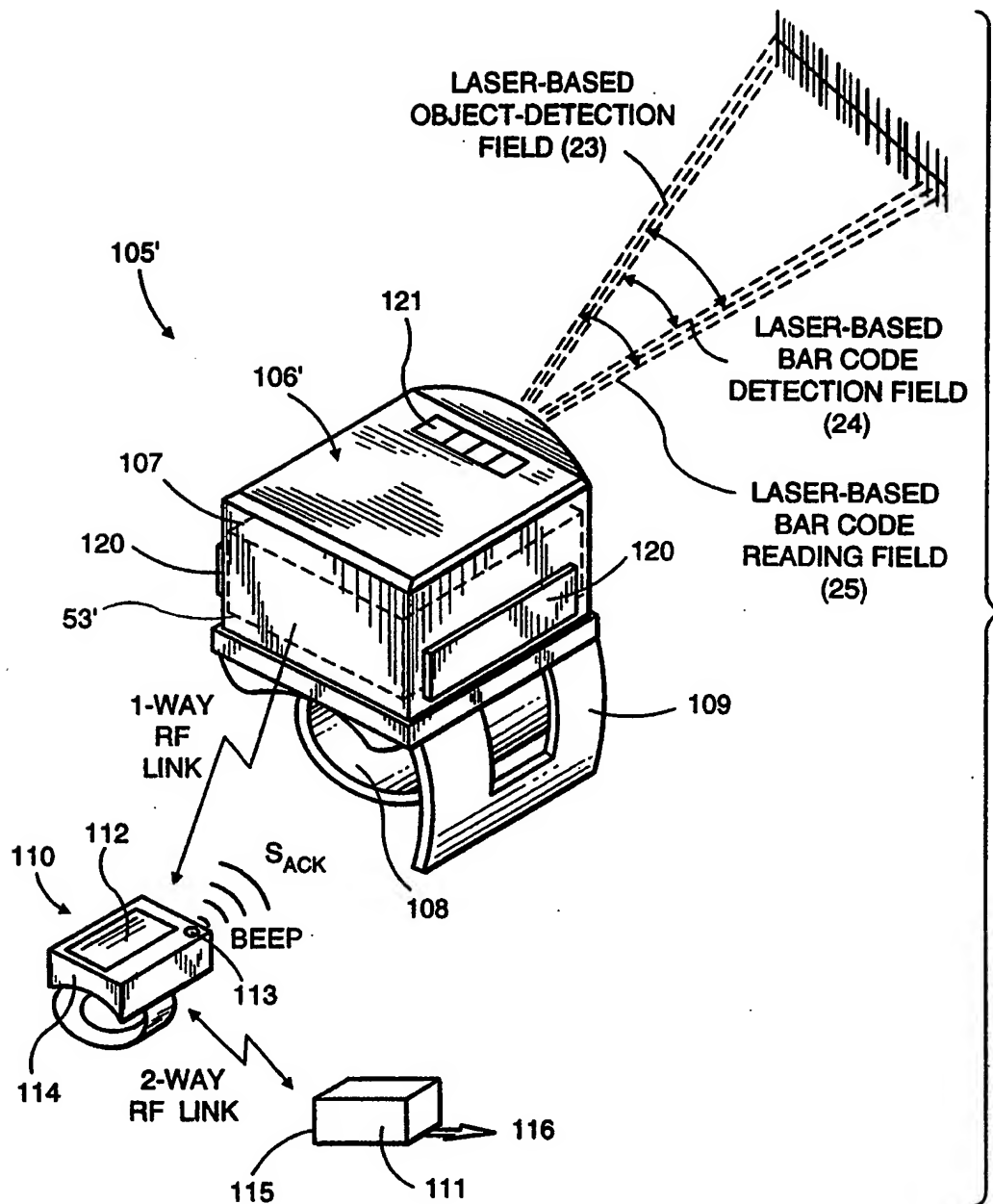


FIG. 5B

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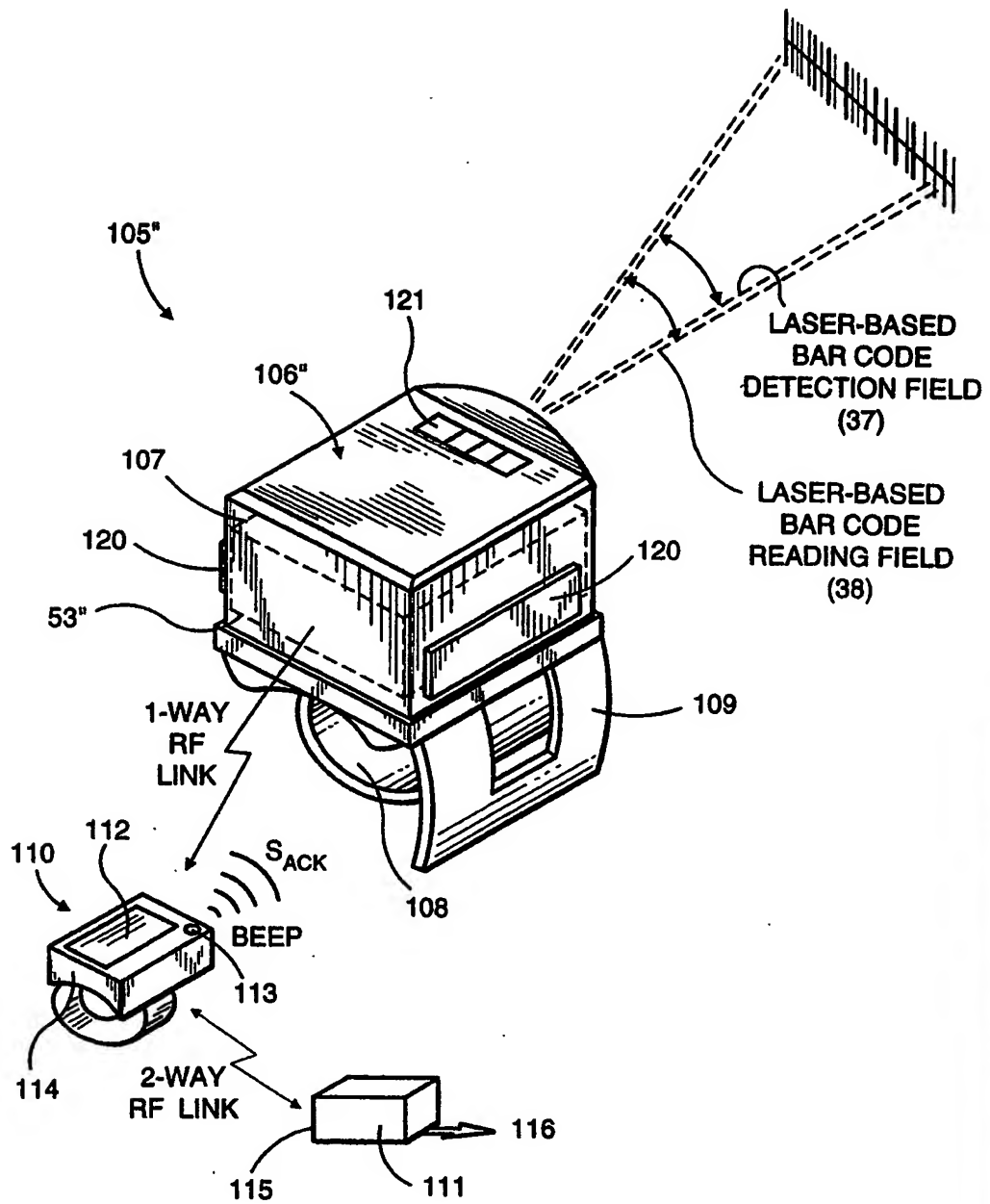
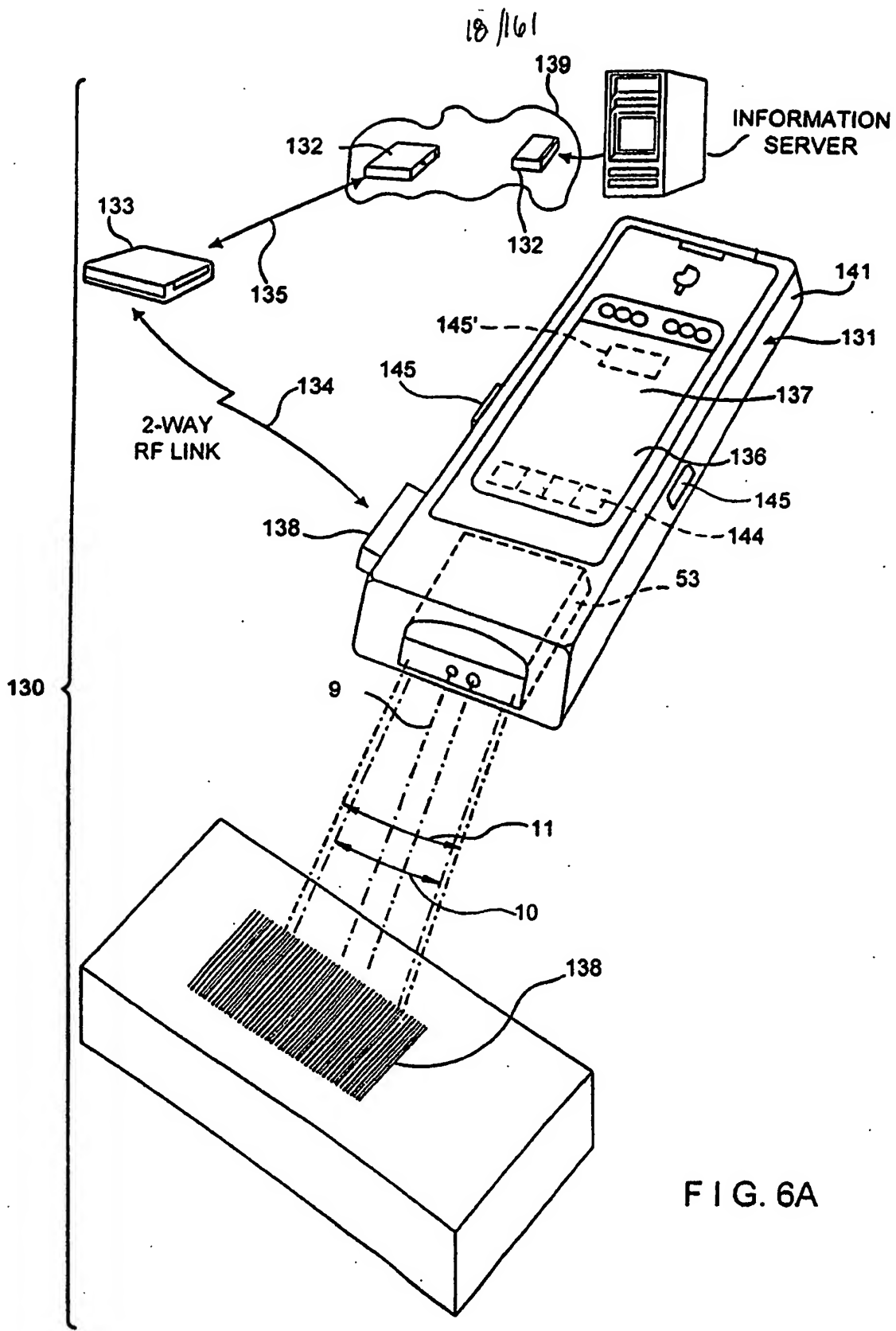


FIG. 5C

FIG. 5D



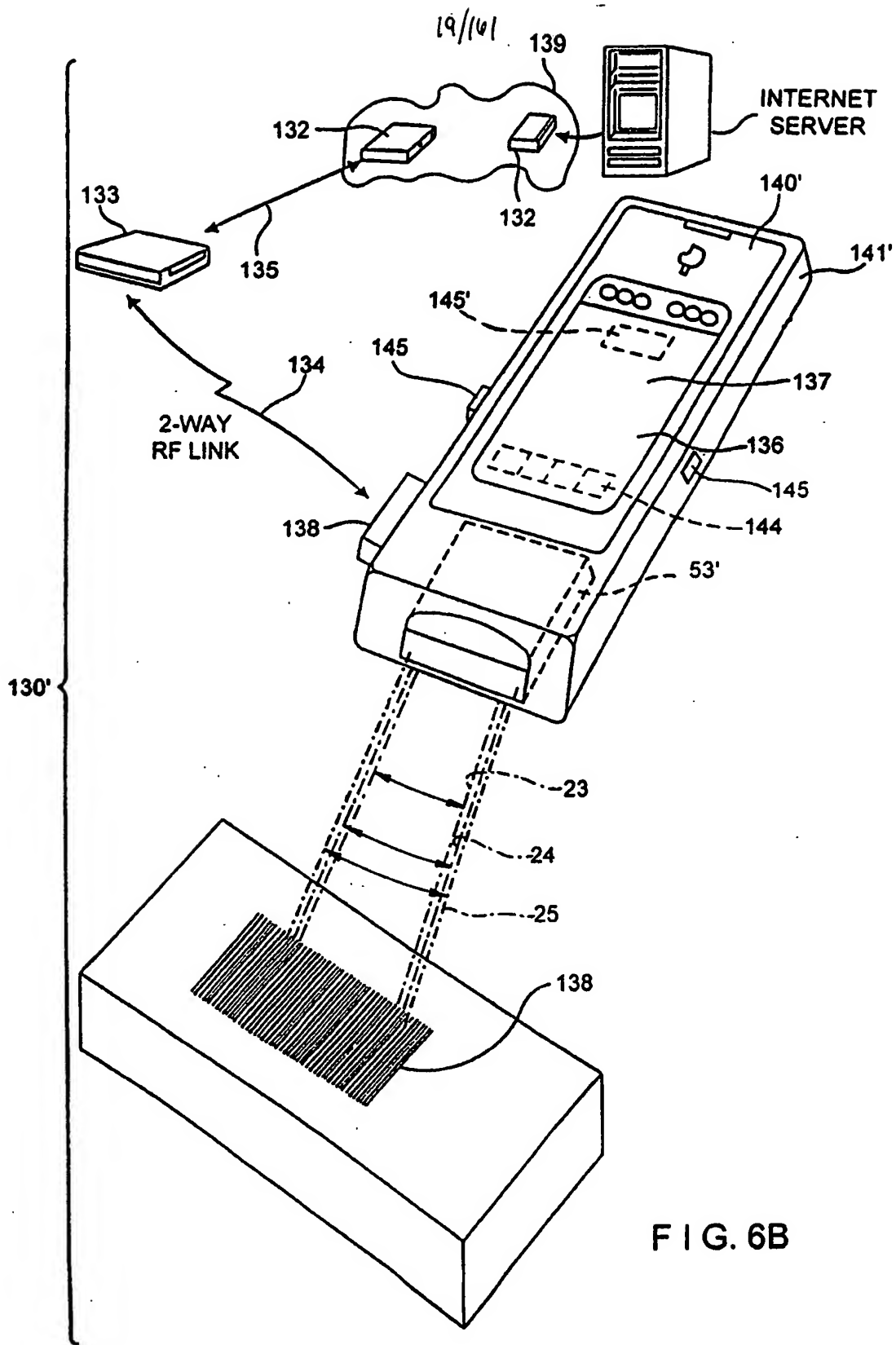
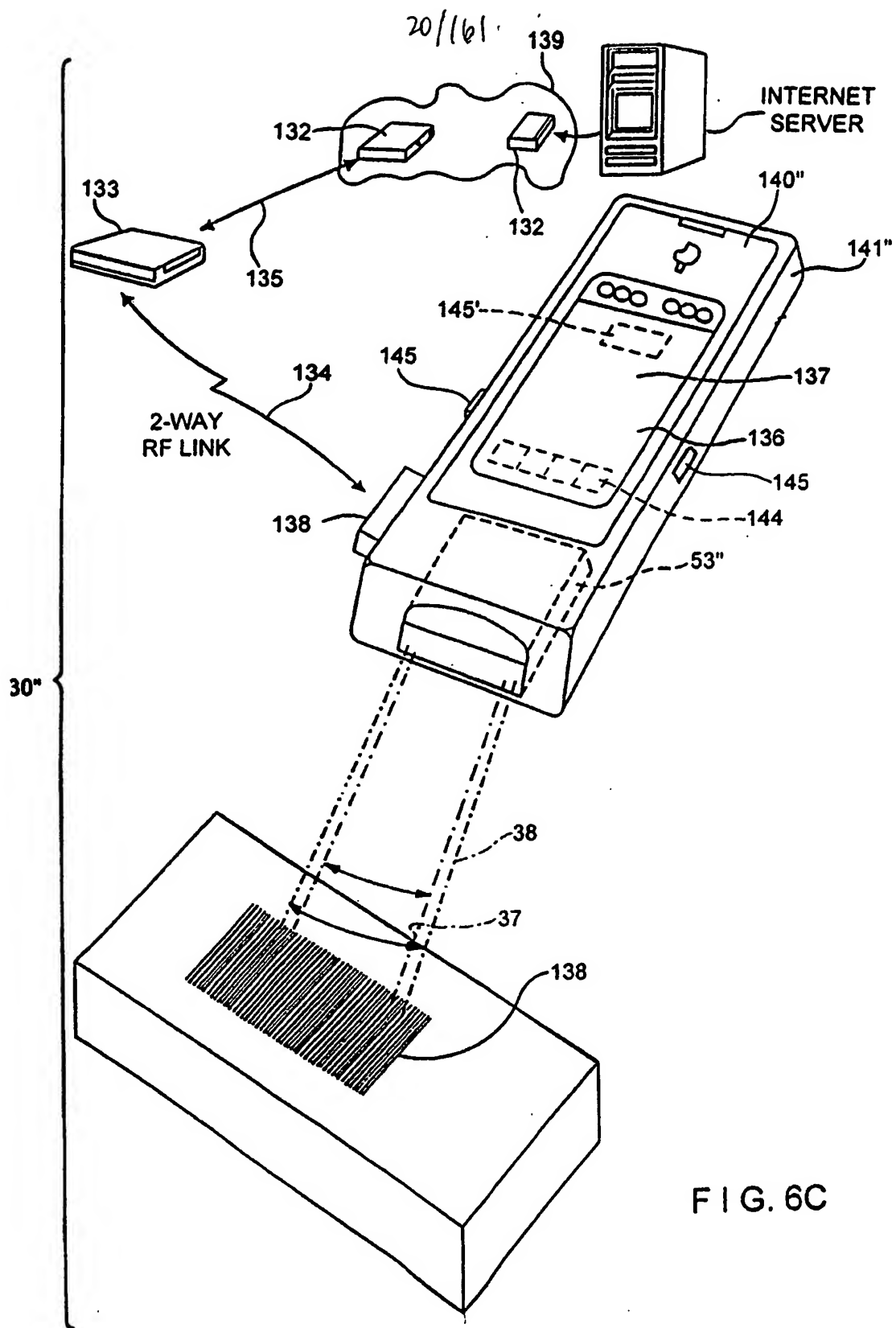


FIG. 6B



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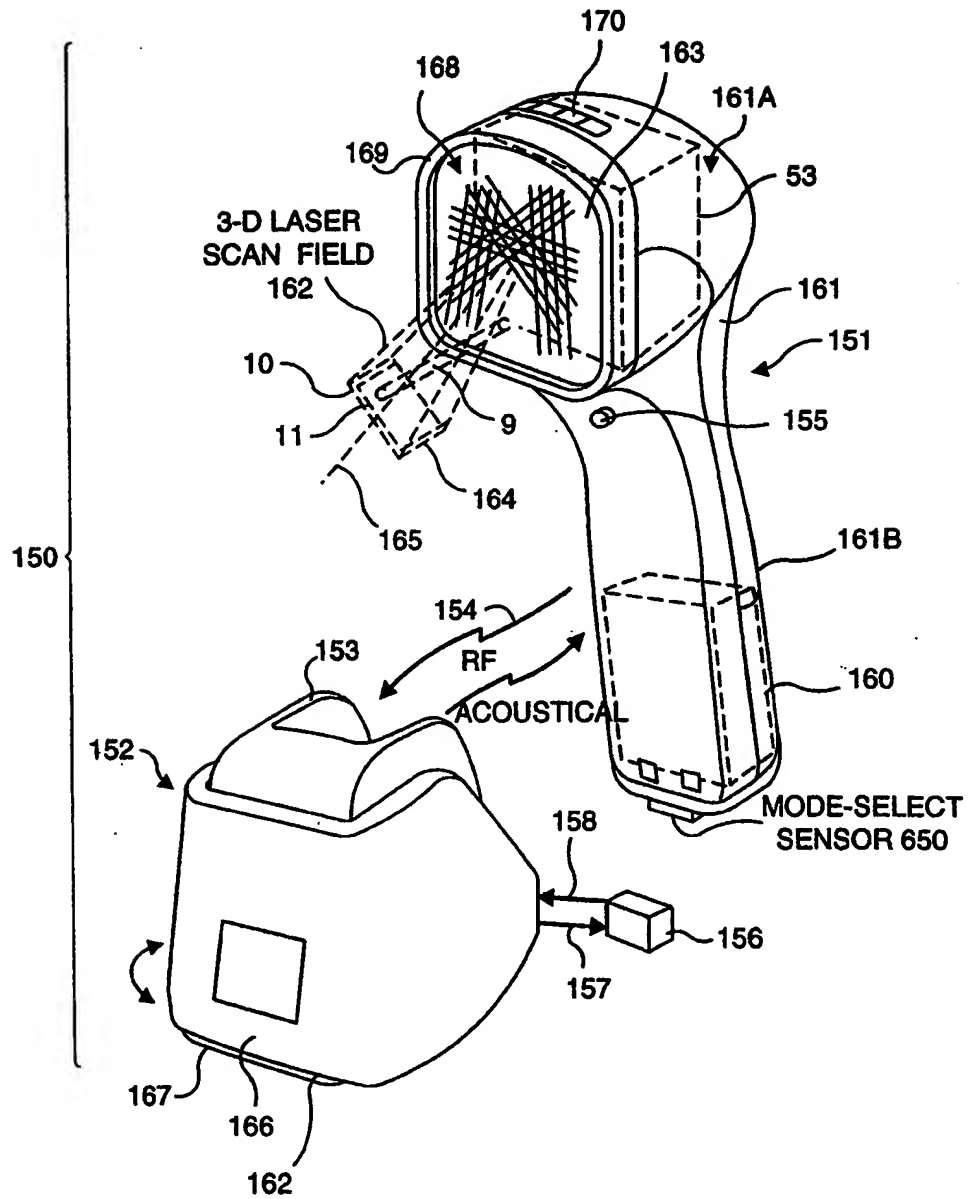


FIG. 7A

FIG. 1 is a perspective view of a handheld device 150' and a base unit 152. The handheld device 150' includes a handle 160, a trigger 155, a display 161A, a speaker 168, a microphone 169, a camera 163, and a sensor 161B. The base unit 152 includes a display 162, a sensor 166, and a connector 157. The handheld device 150' is shown emitting RF and ACOUSTICAL signals 154 towards the base unit 152. A MODE-SELECT SENSOR 650 is also indicated.

FIG. 7B

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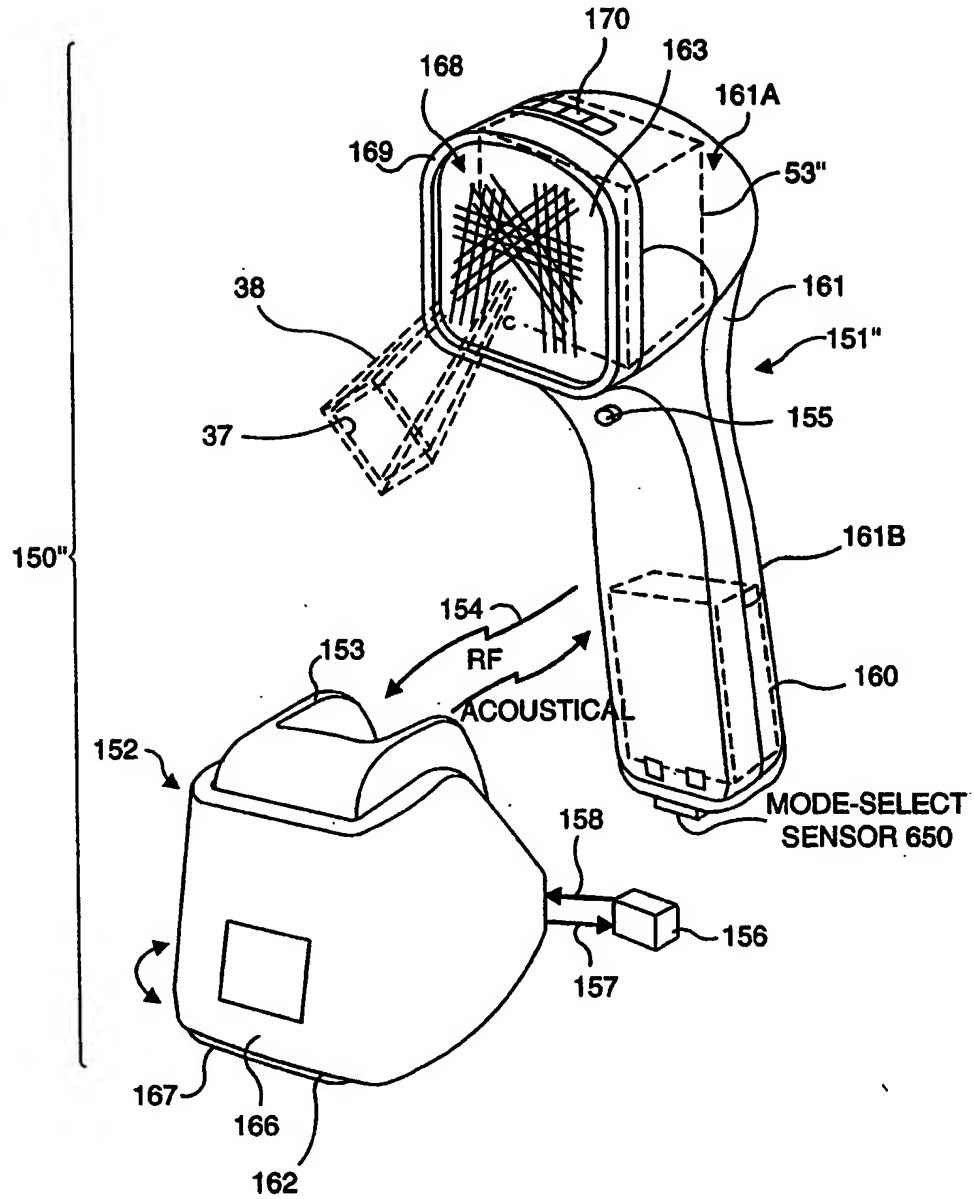


FIG. 7C

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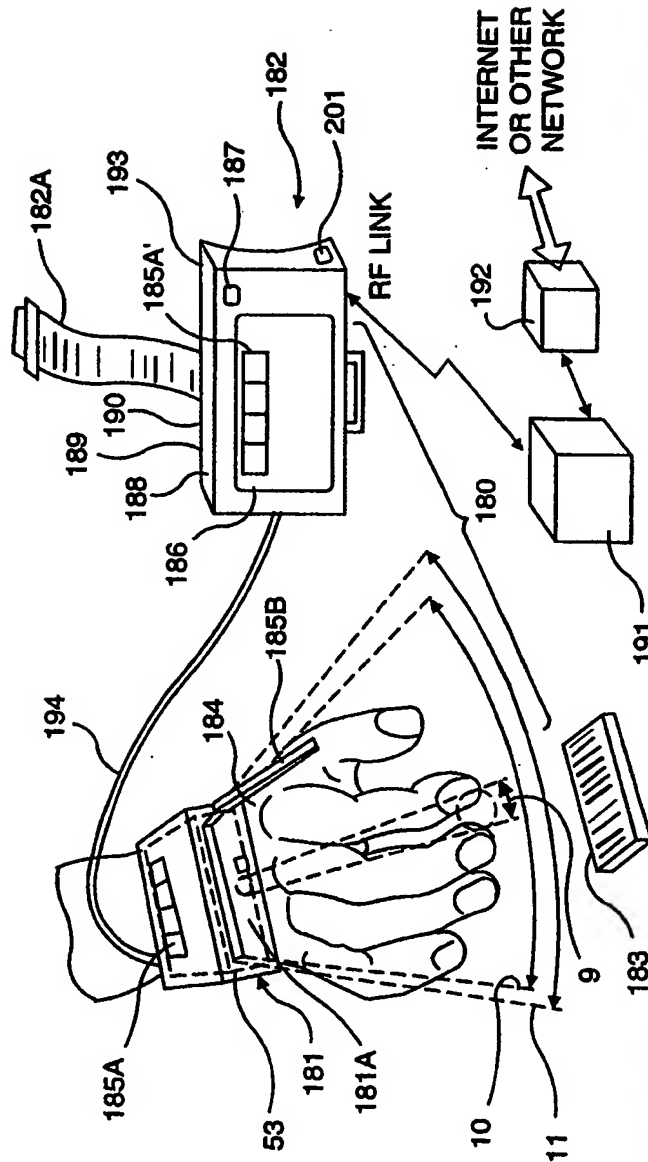


FIG. 8A

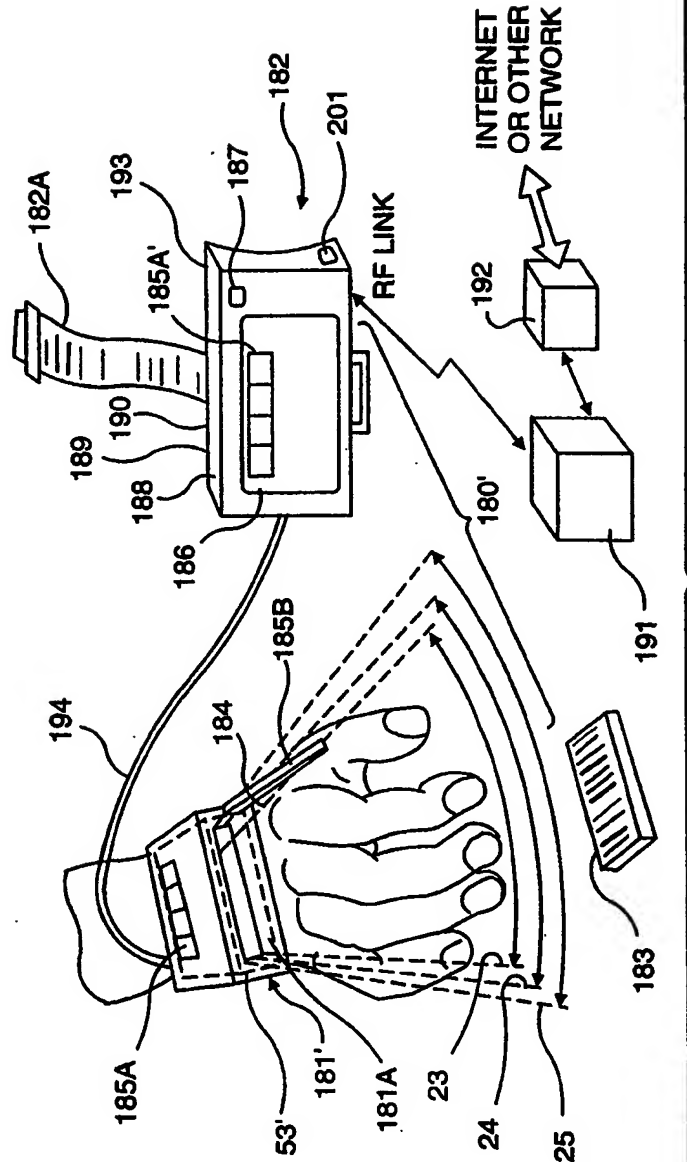


FIG. 8B

FIG. 8C

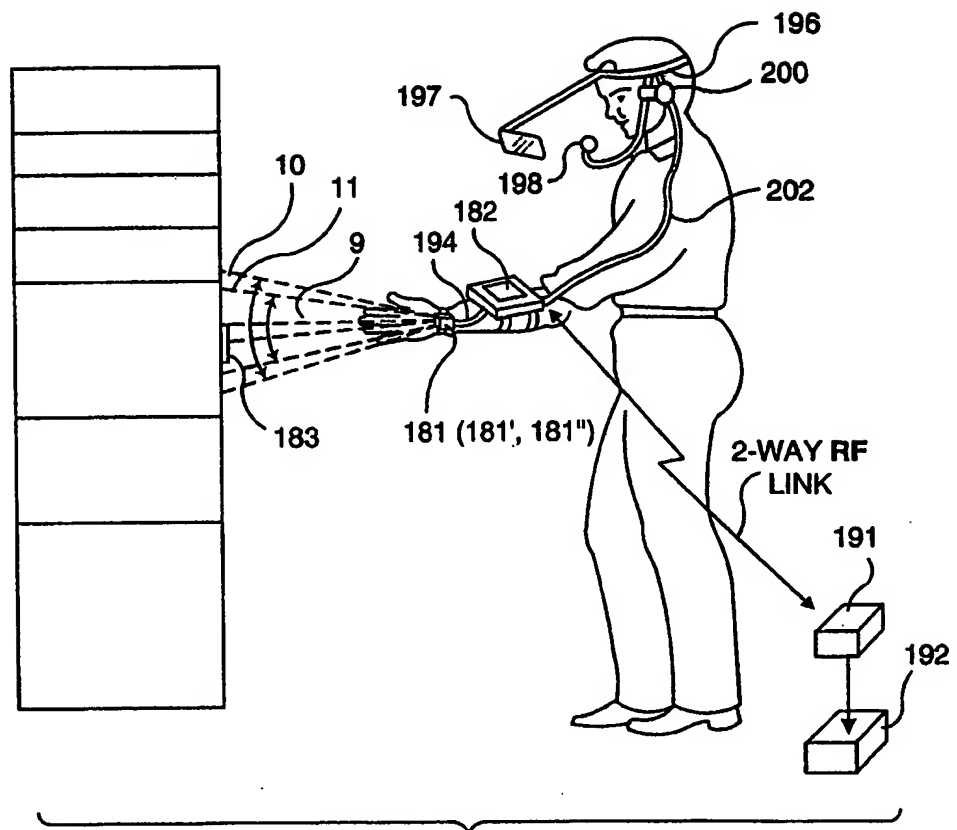
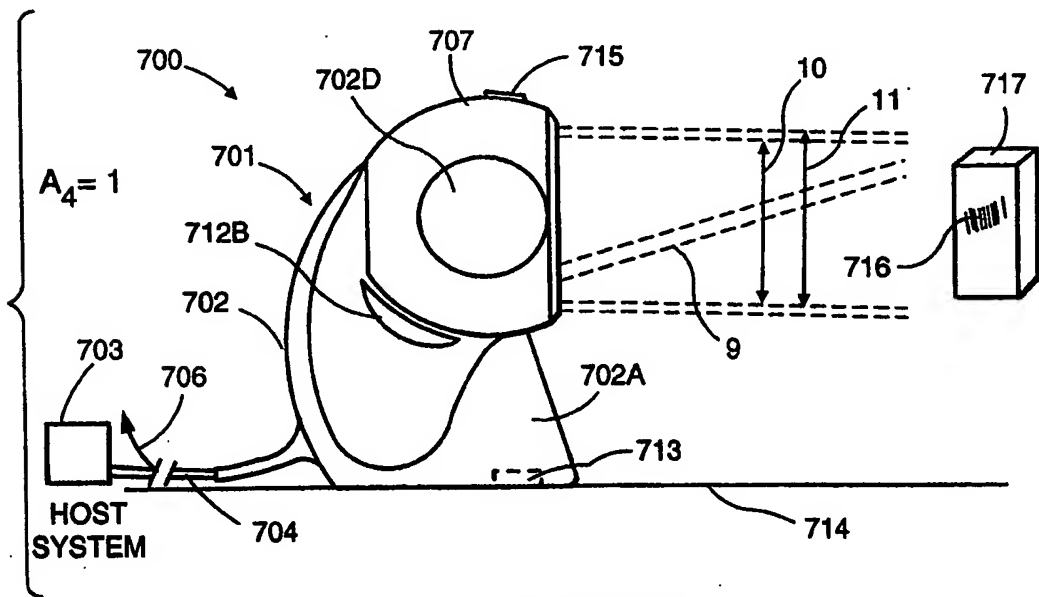
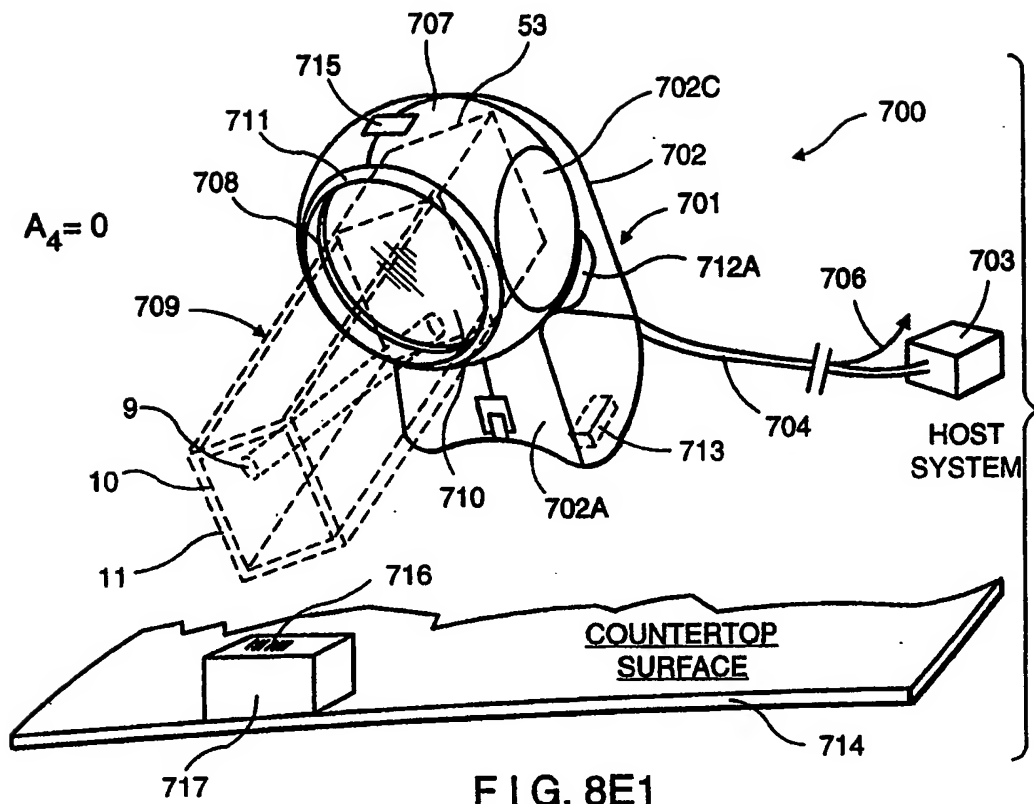


FIG. 8D

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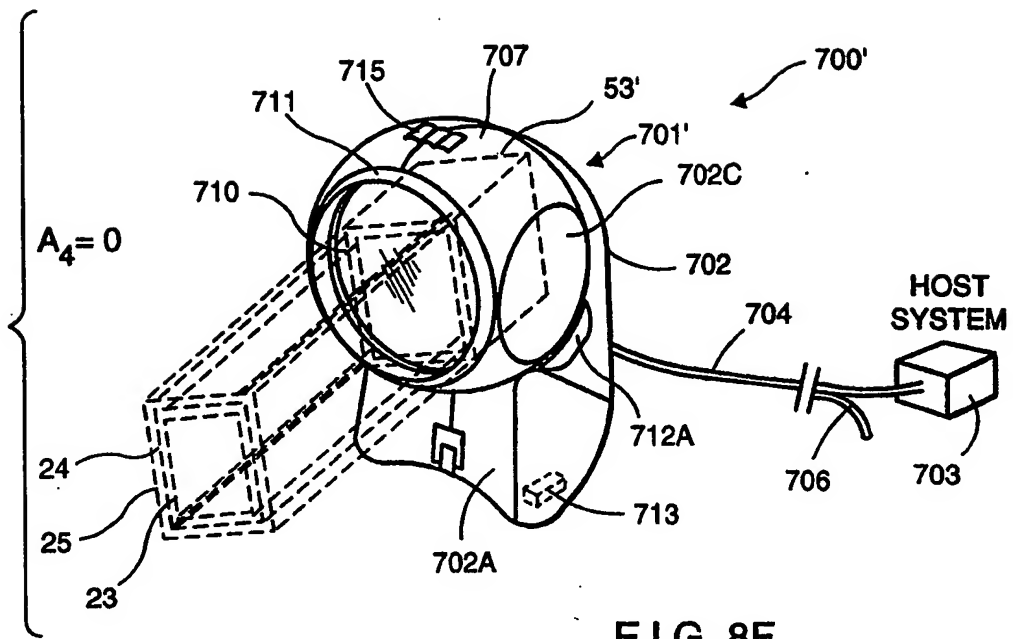


FIG. 8F

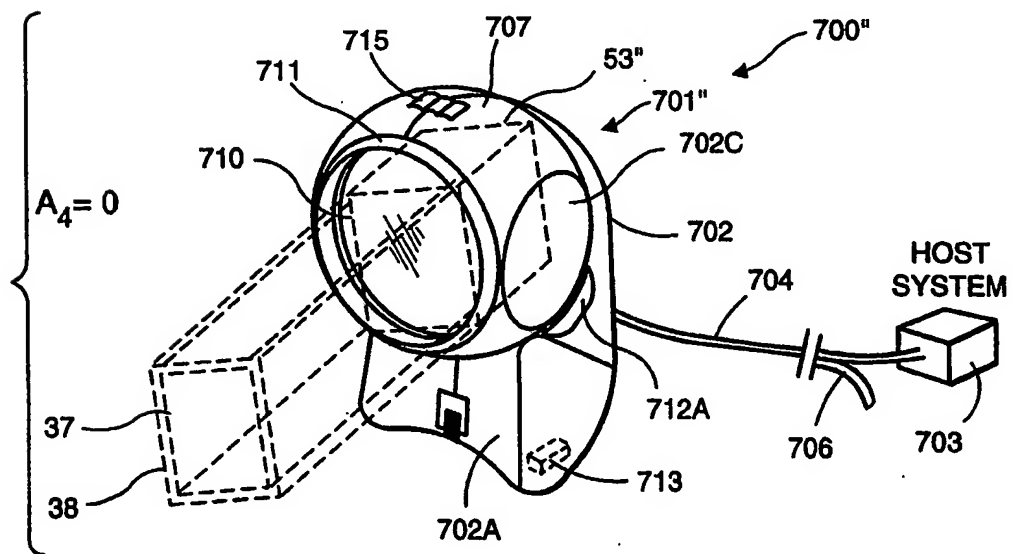


FIG. 8G

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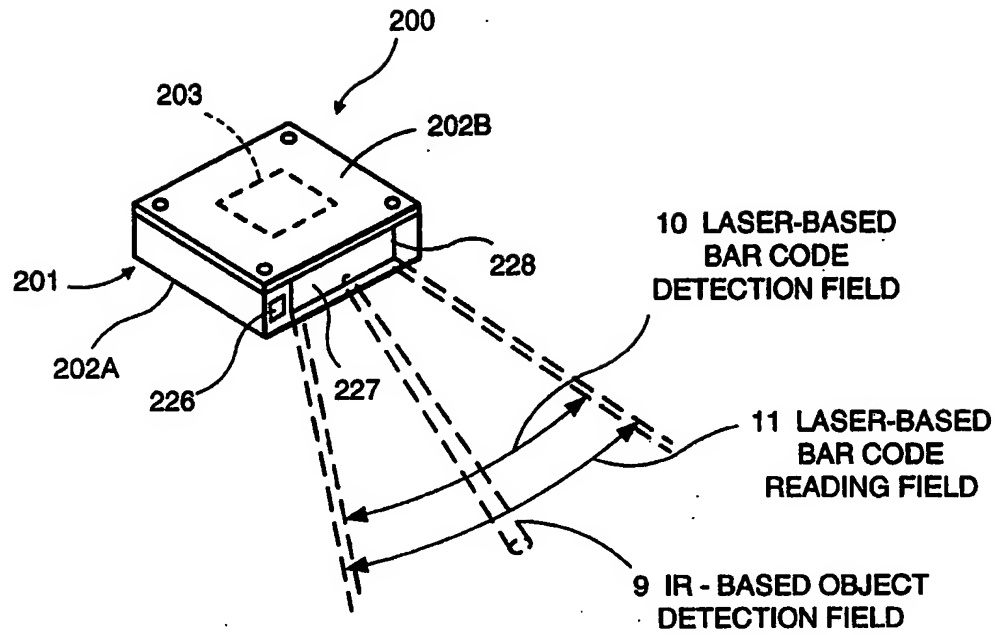


FIG. 9A

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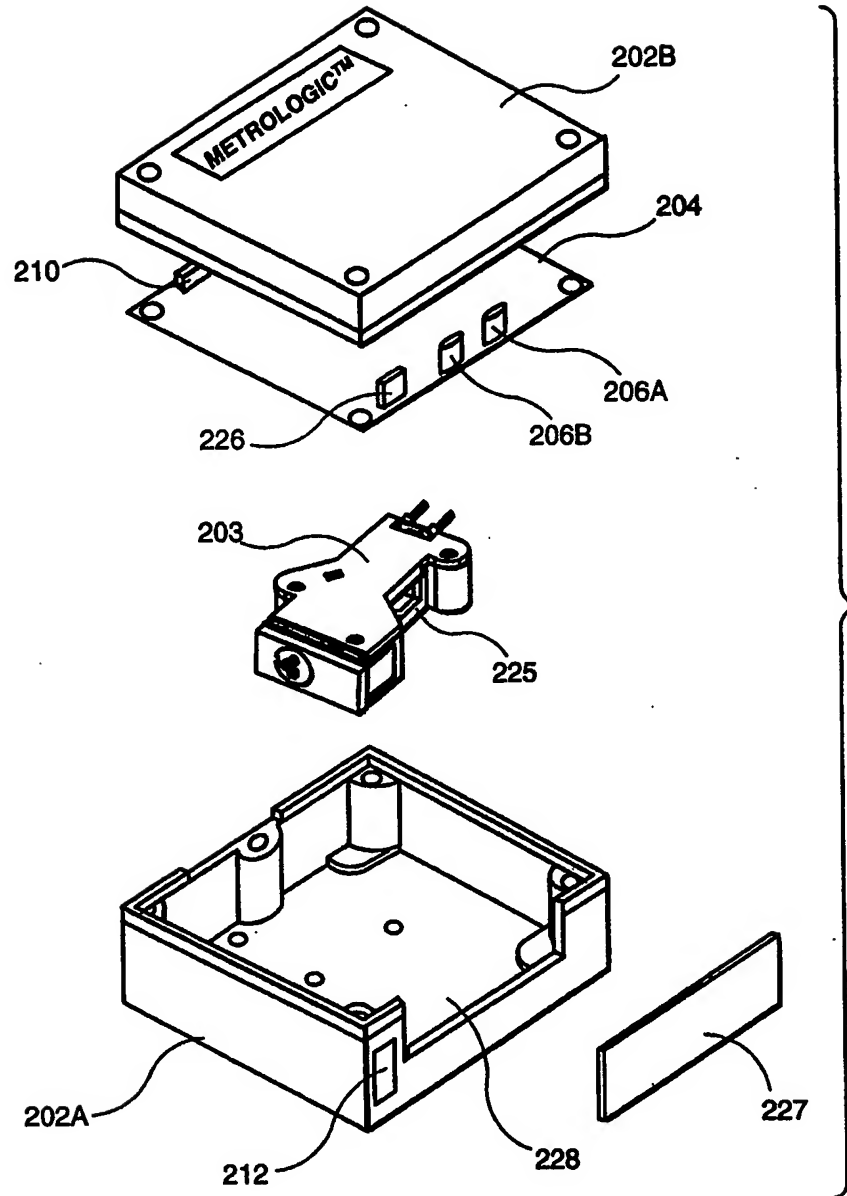


FIG. 9B

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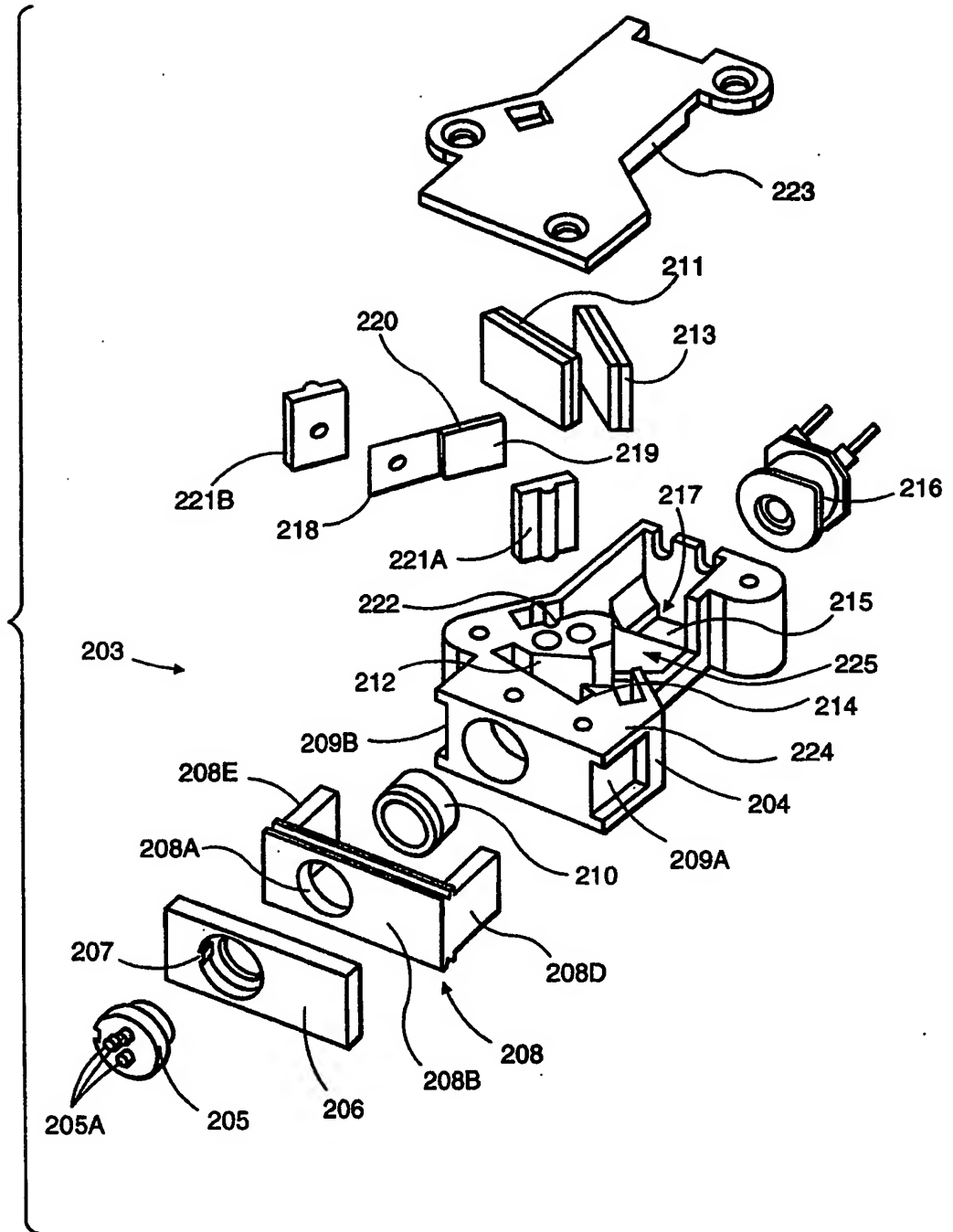


FIG. 9C

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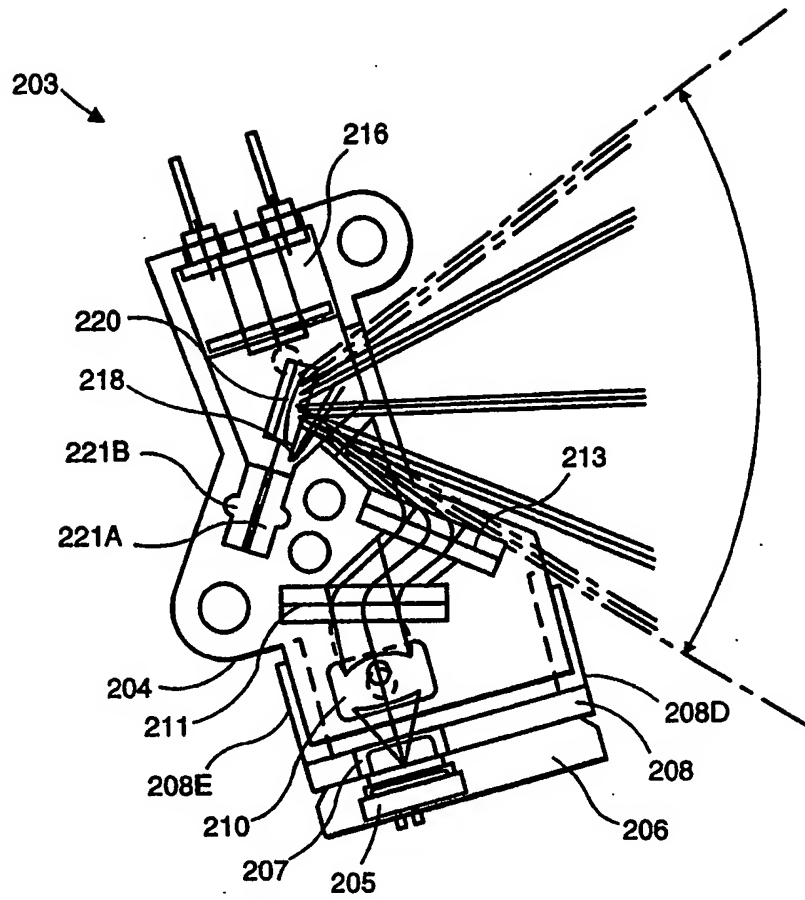


FIG. 9D

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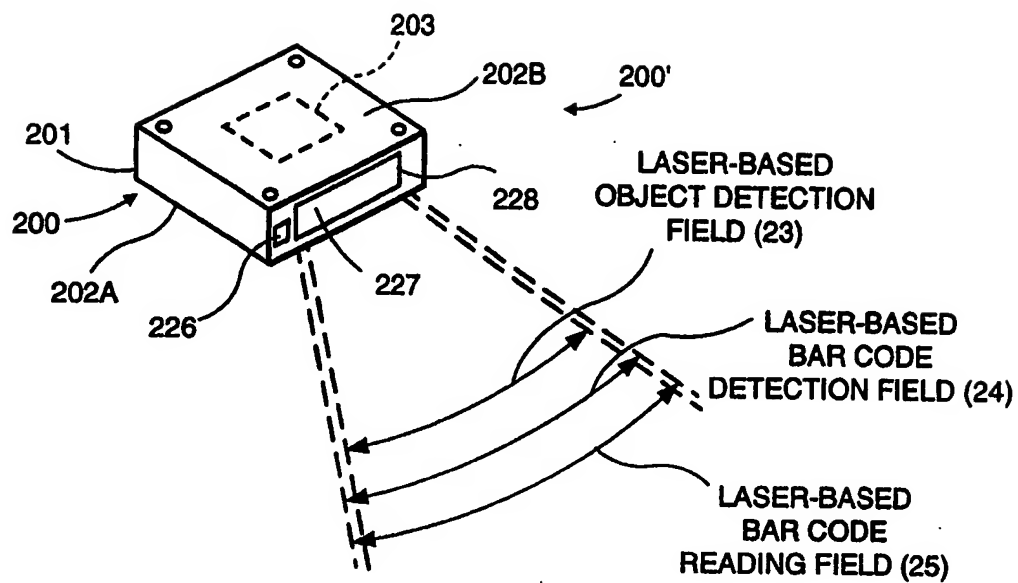


FIG. 9E

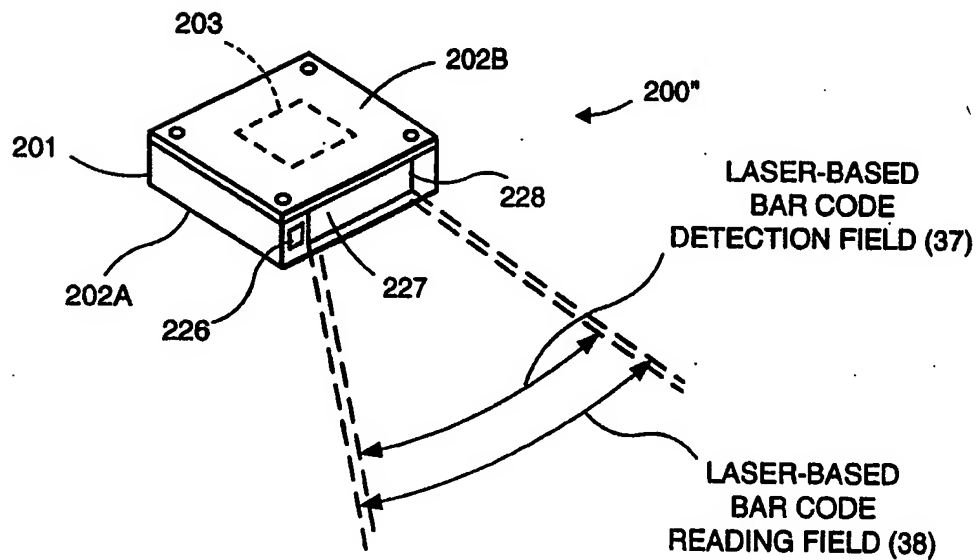


FIG. 9F

FIG. 10A

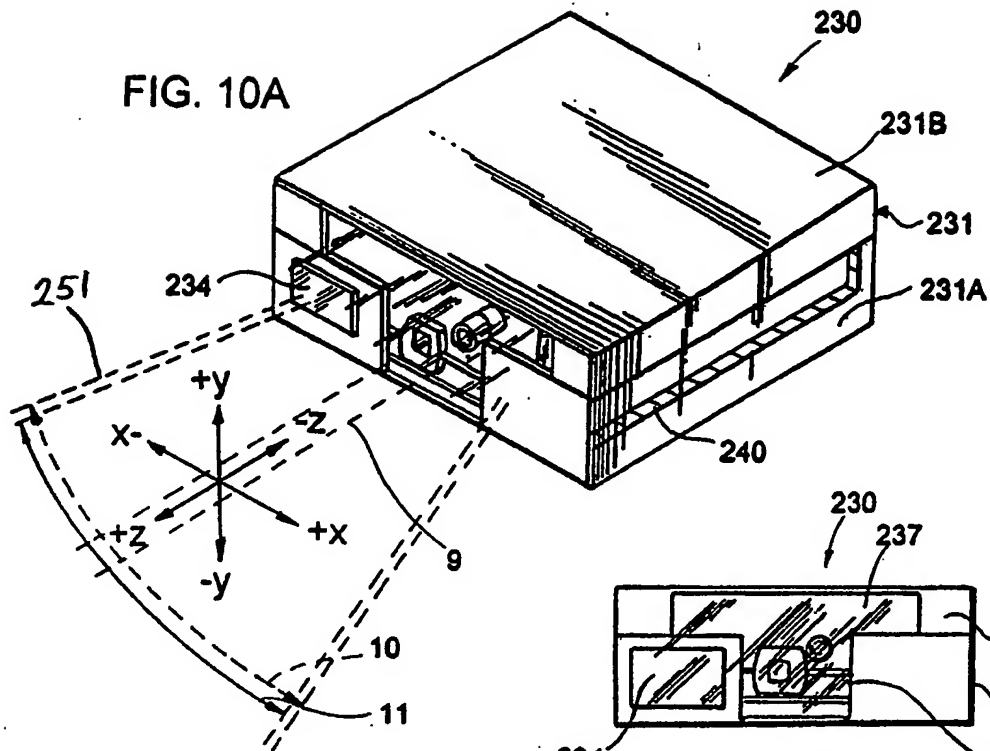


FIG. 10B

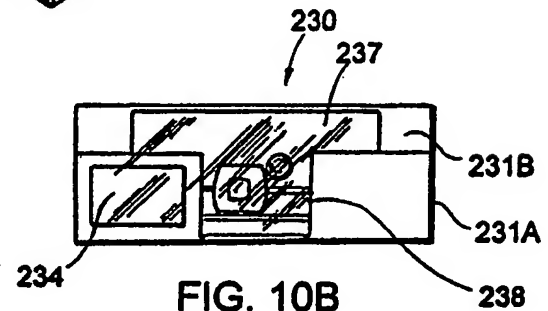


FIG. 10C

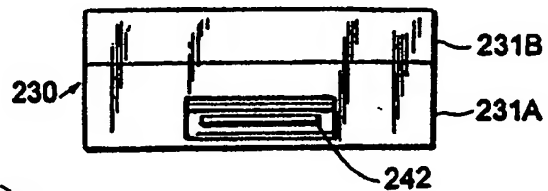
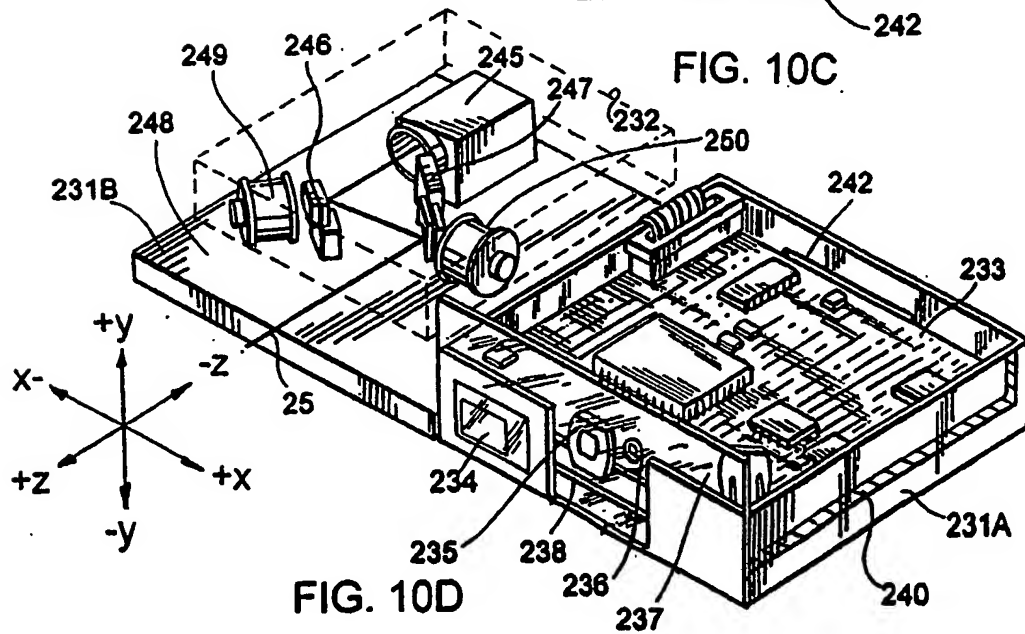


FIG. 10D



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FIG. 10E

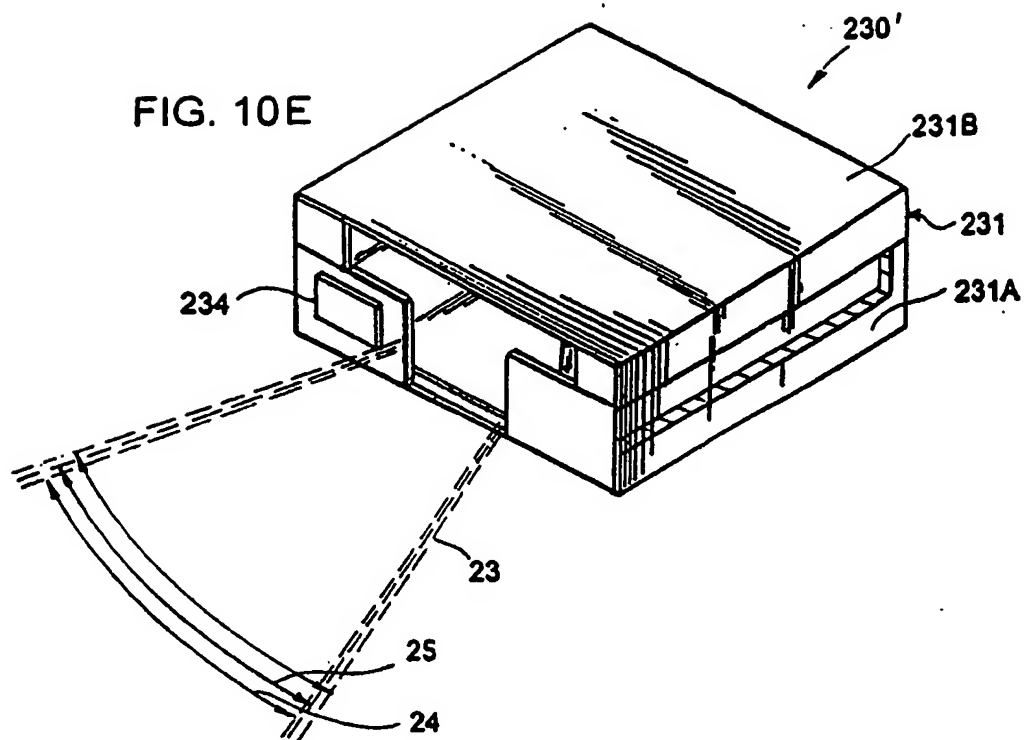
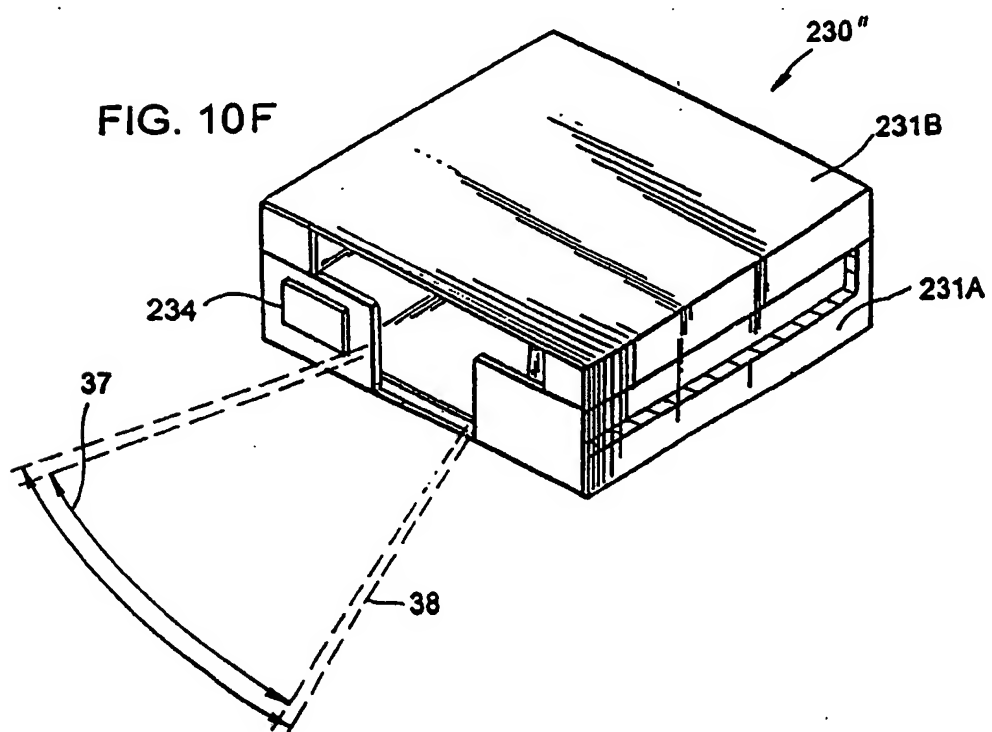


FIG. 10F



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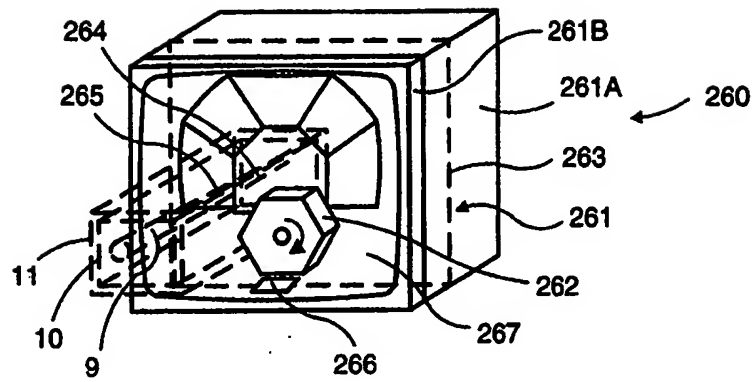


FIG. 11A

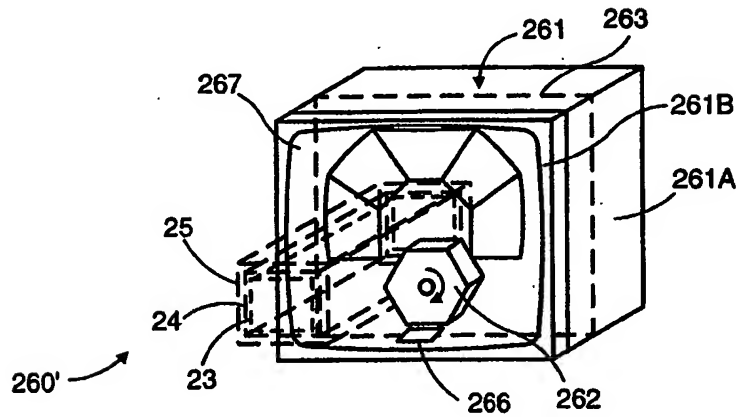


FIG. 11B

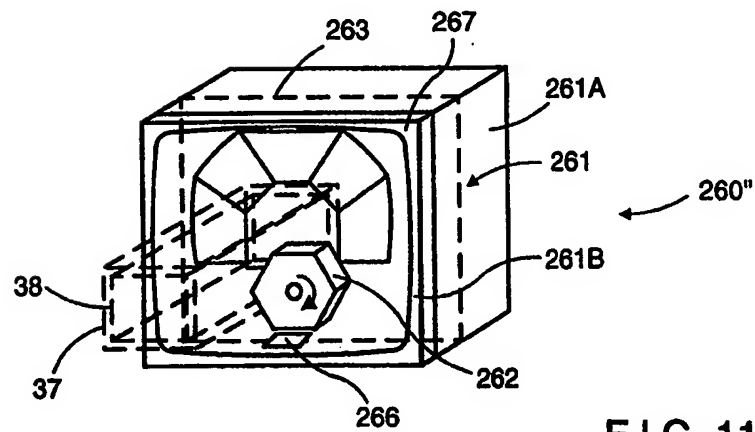


FIG. 11C

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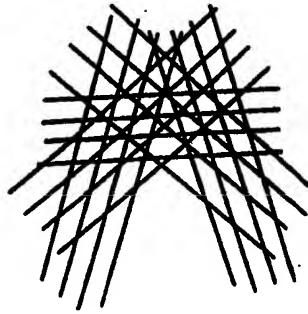


FIG. 12A

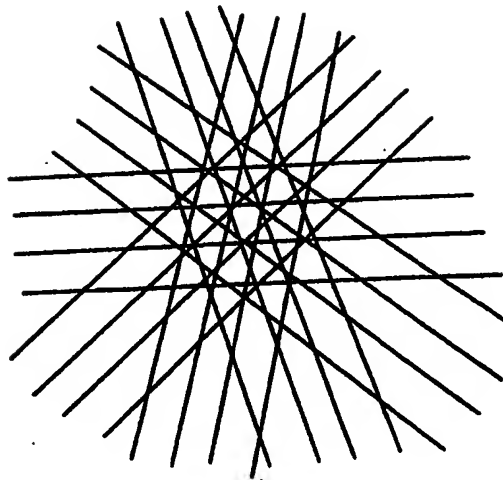
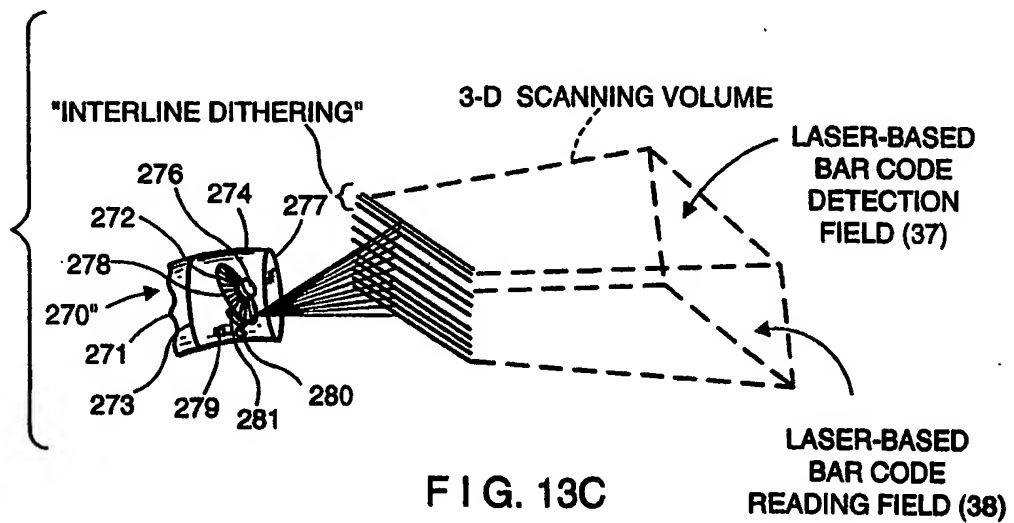
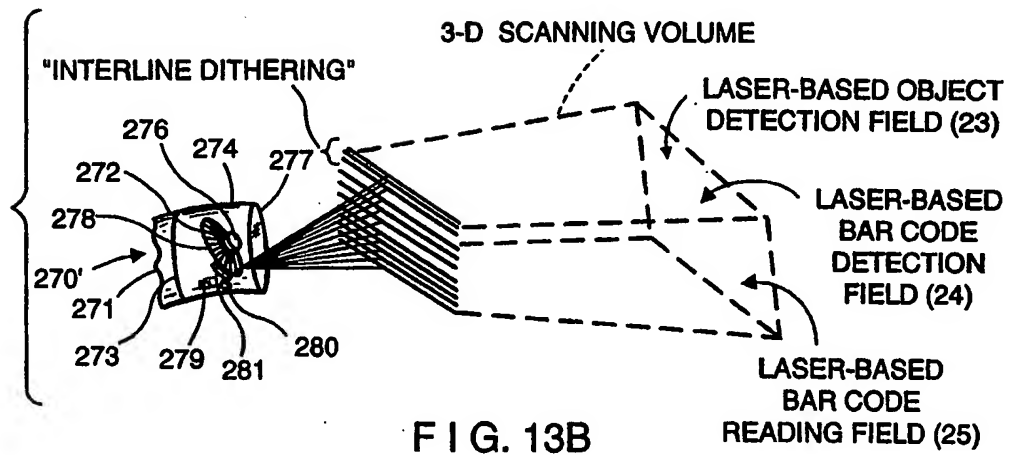
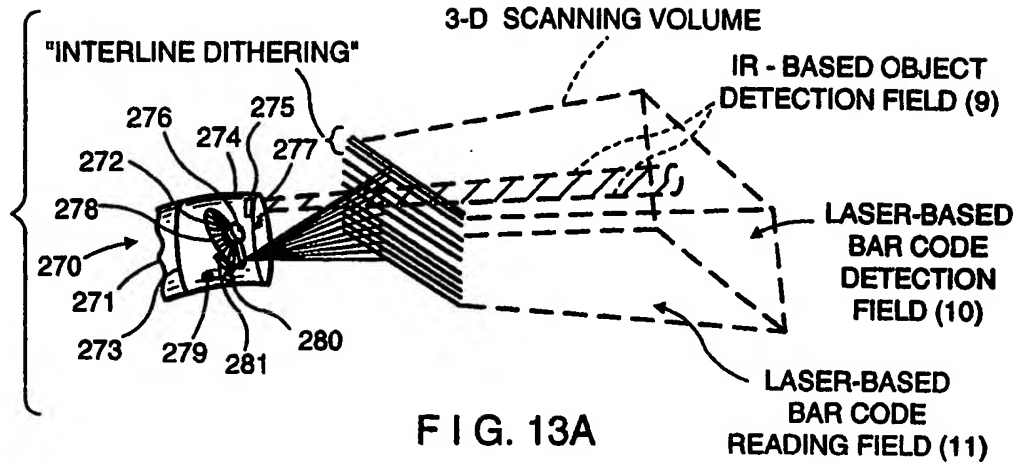
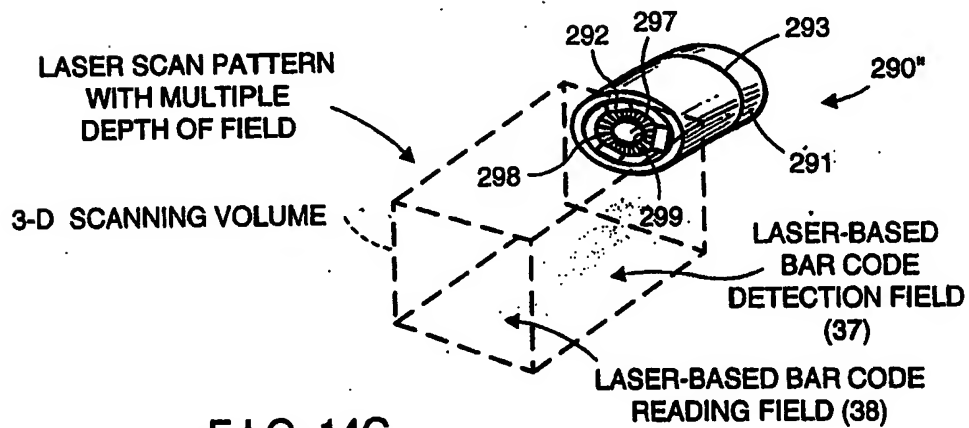
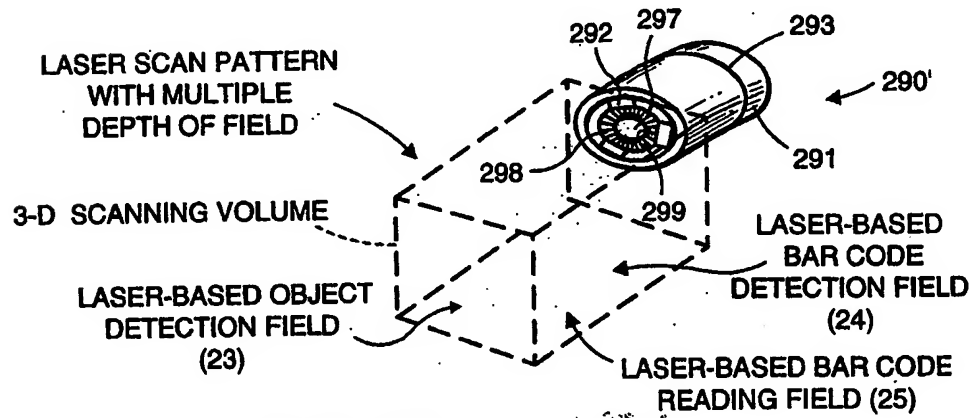
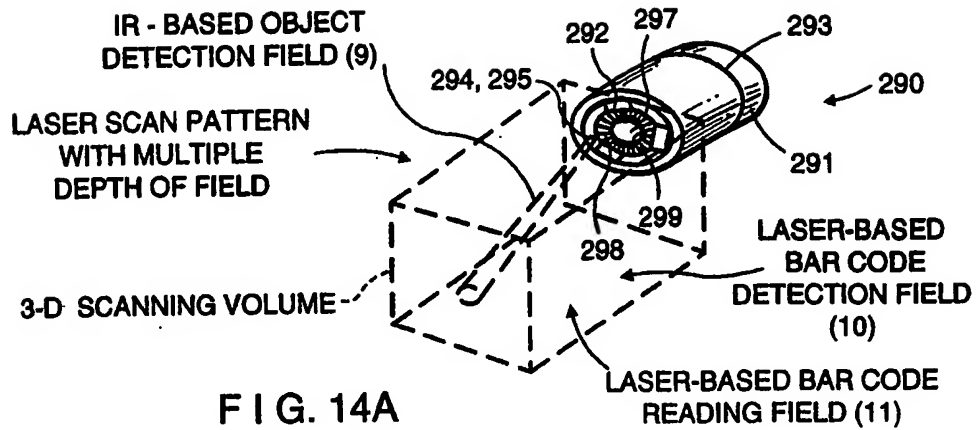


FIG. 12B

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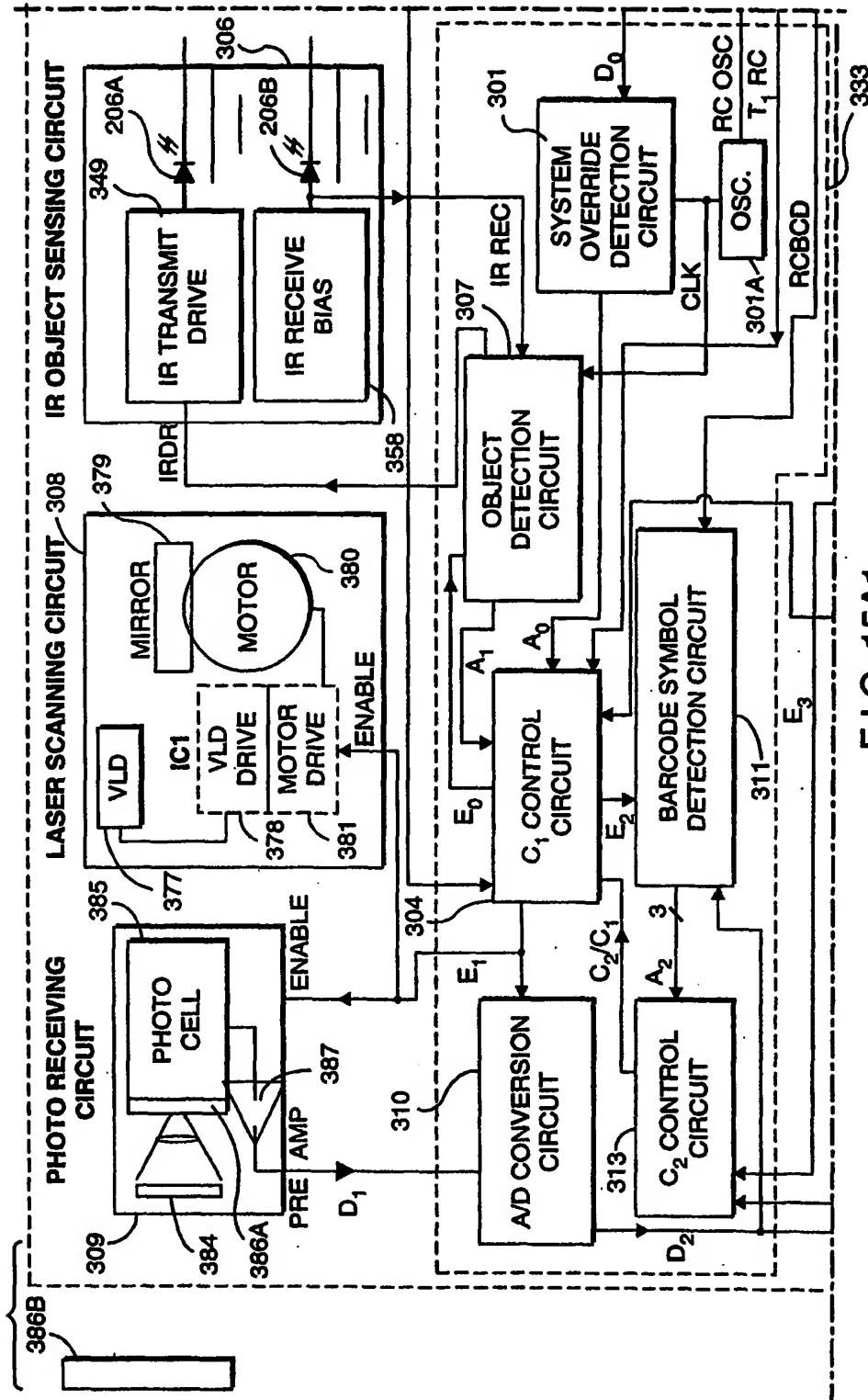


FIG. 15A1

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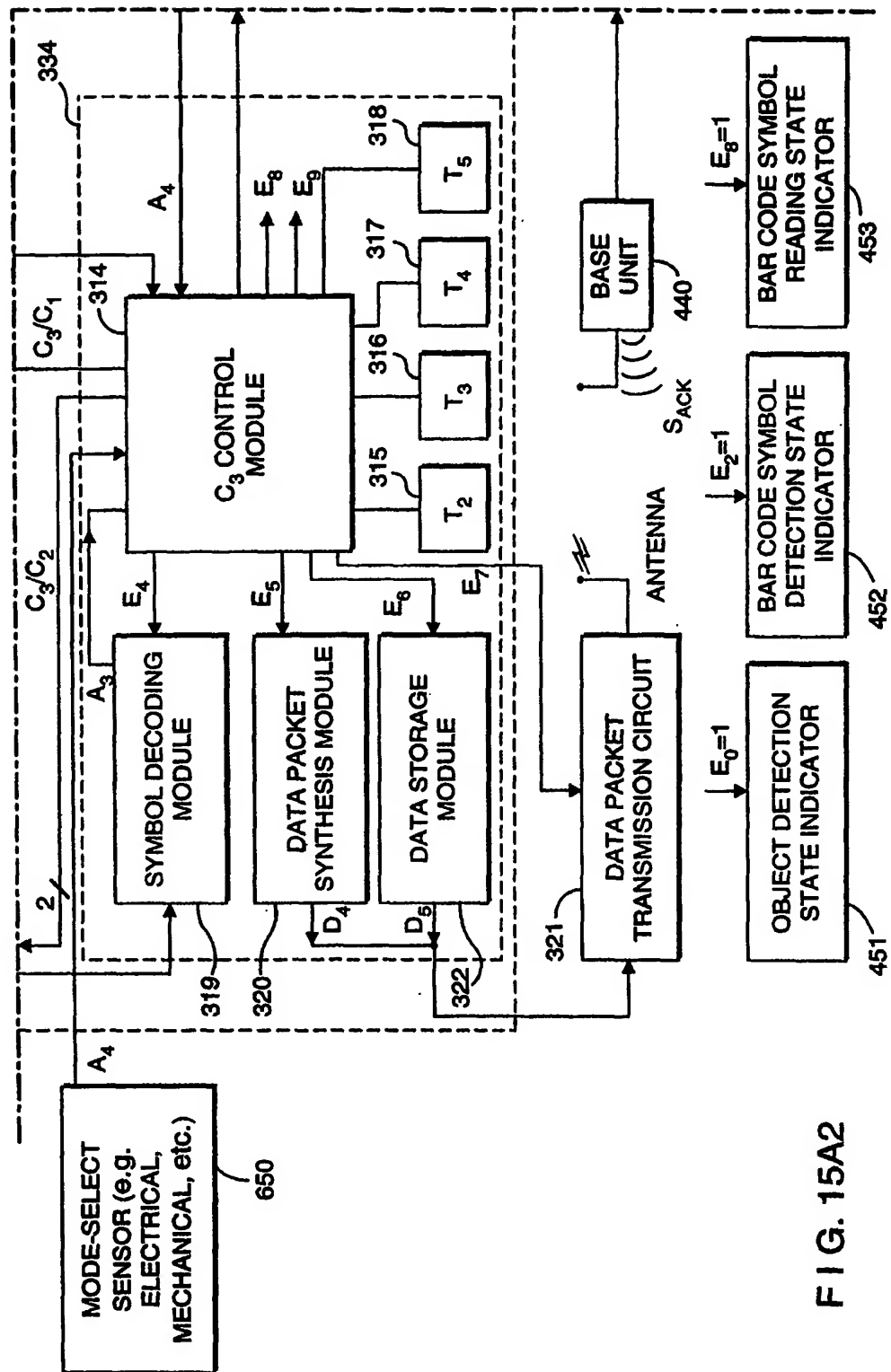


FIG. 15A2

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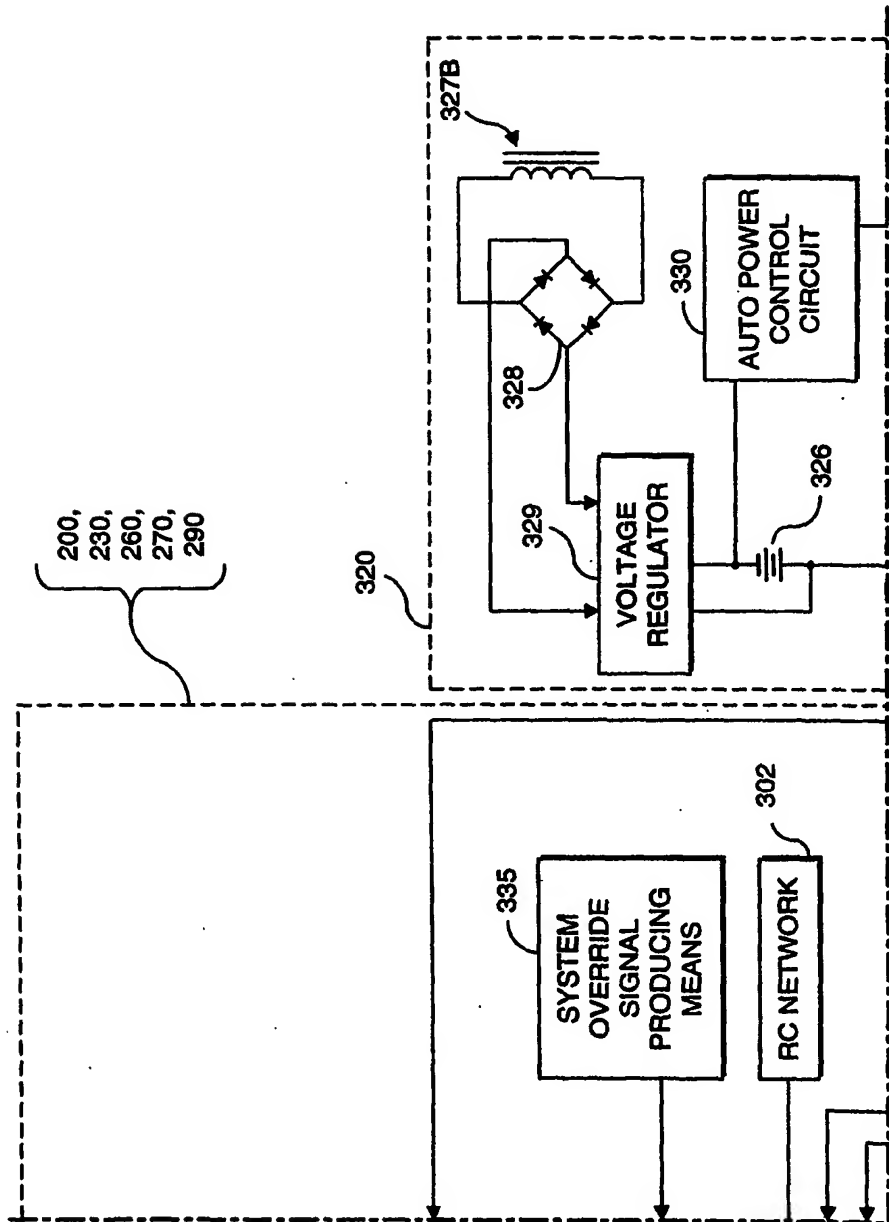


FIG. 15A3

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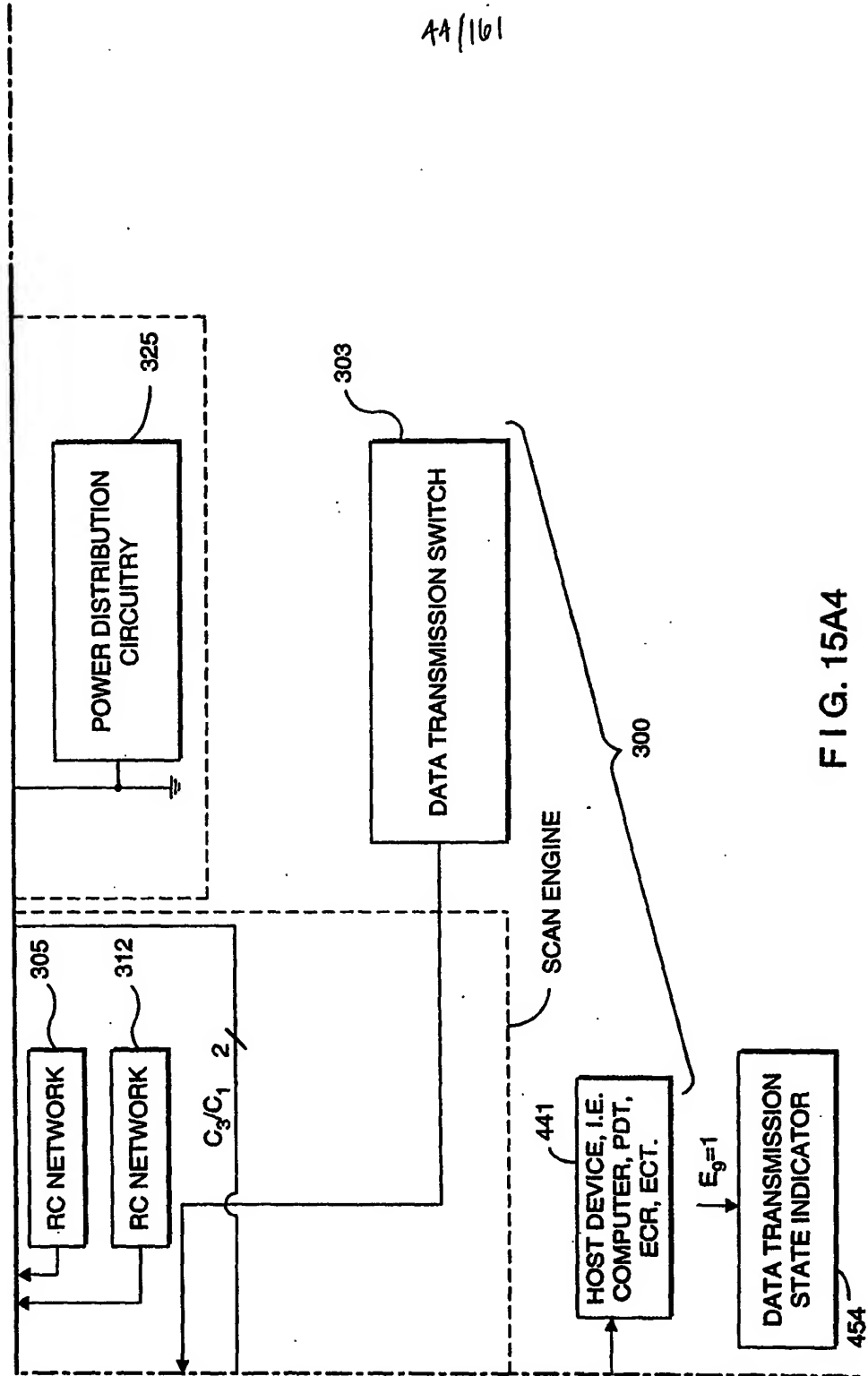


FIG. 15A4

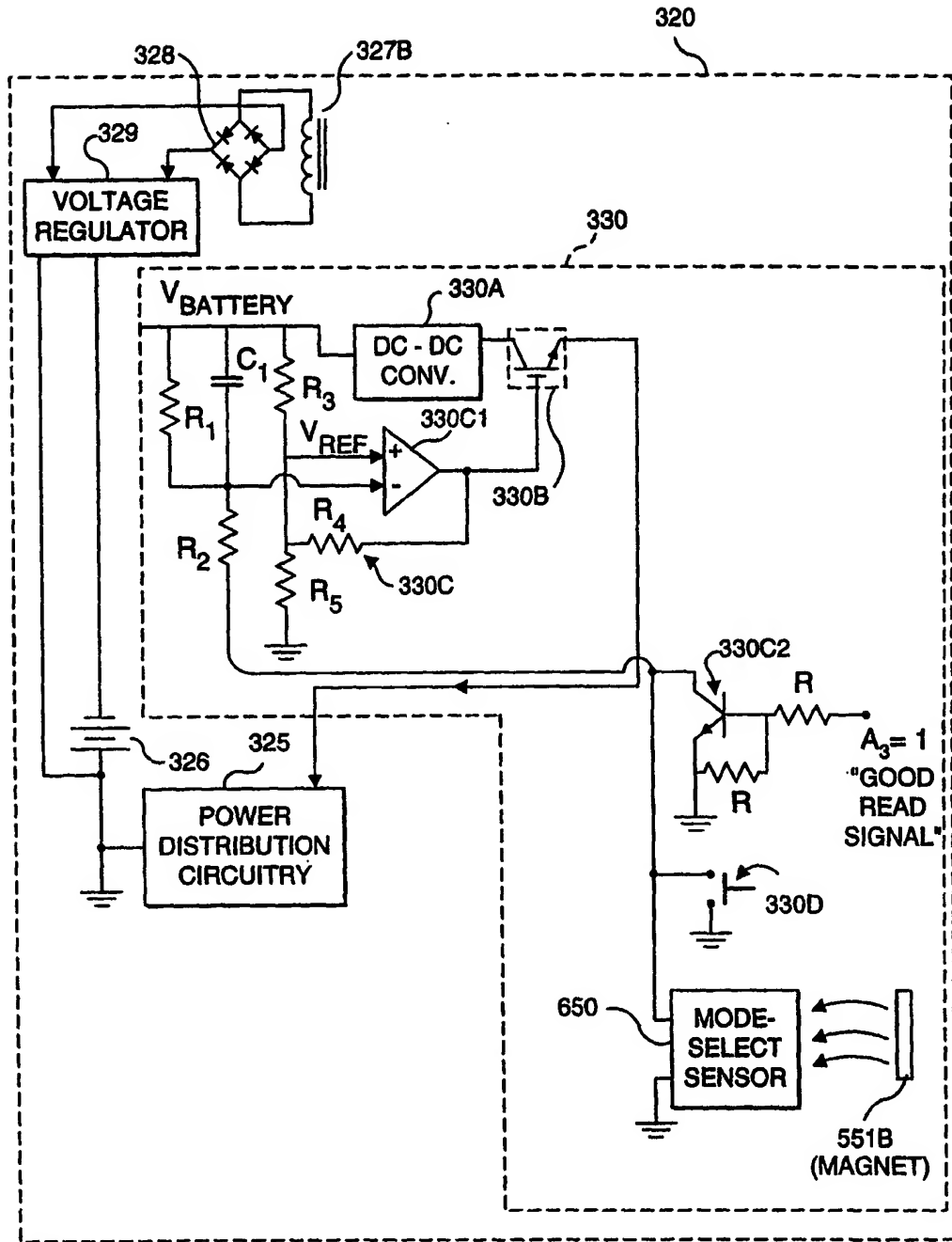


FIG. 15B1

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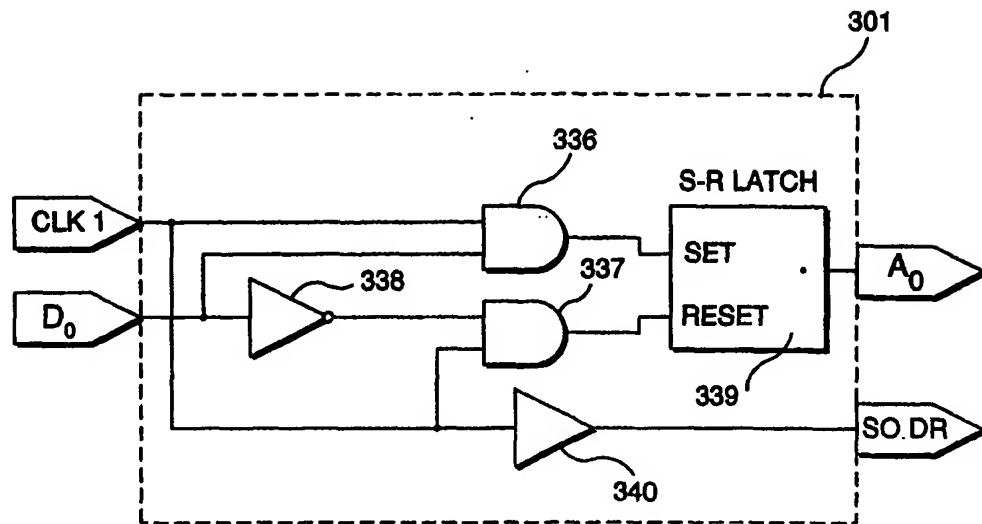


FIG. 15B2

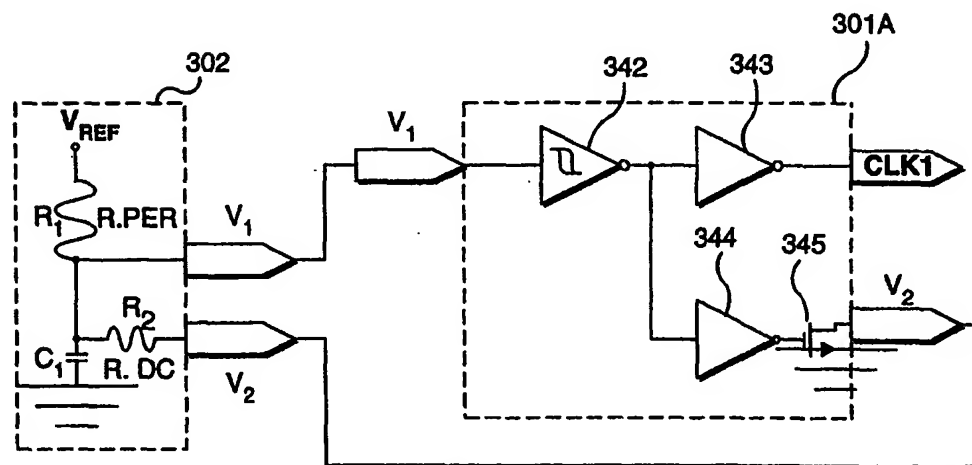


FIG. 15C

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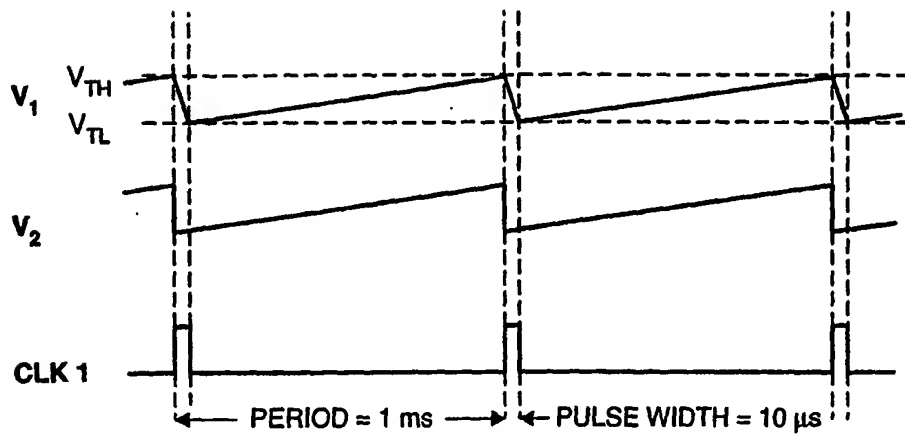


FIG. 15D

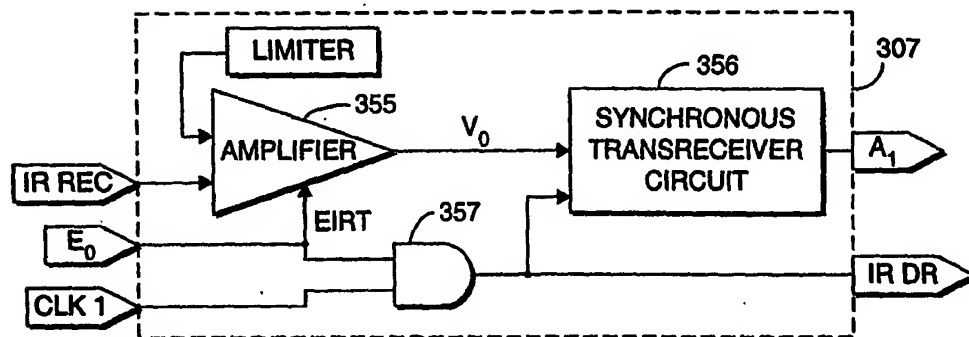


FIG. 15E

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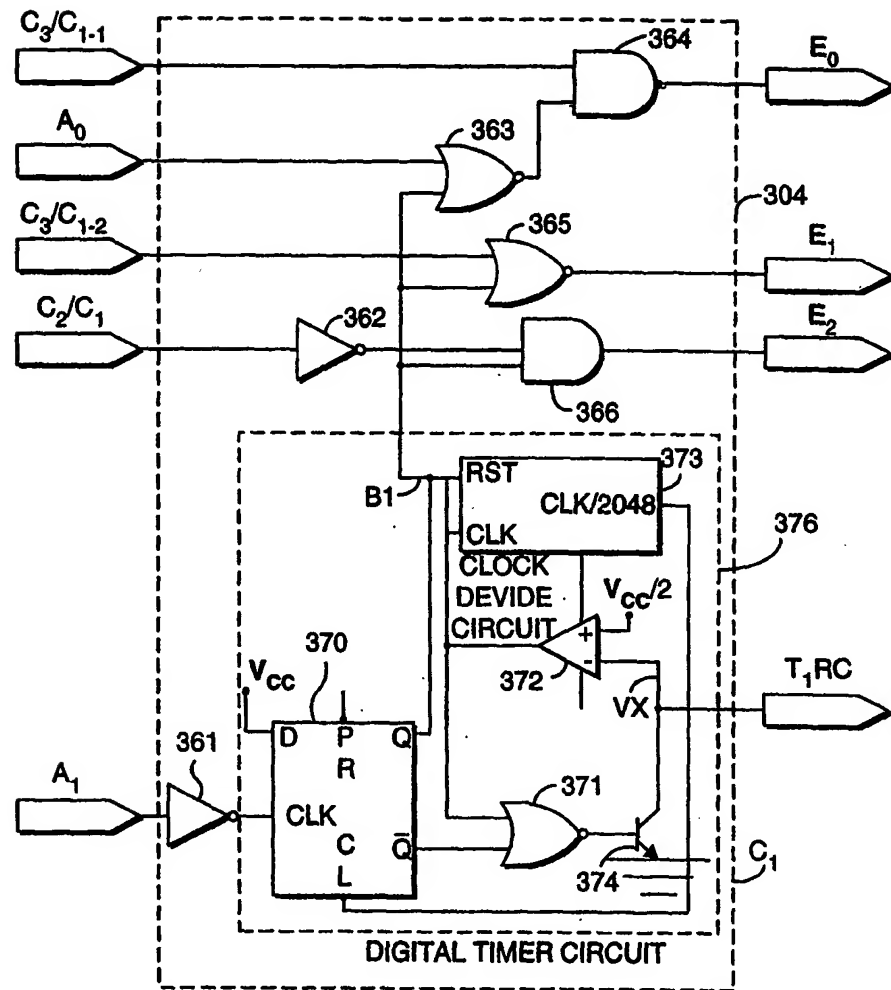


FIG. 15F

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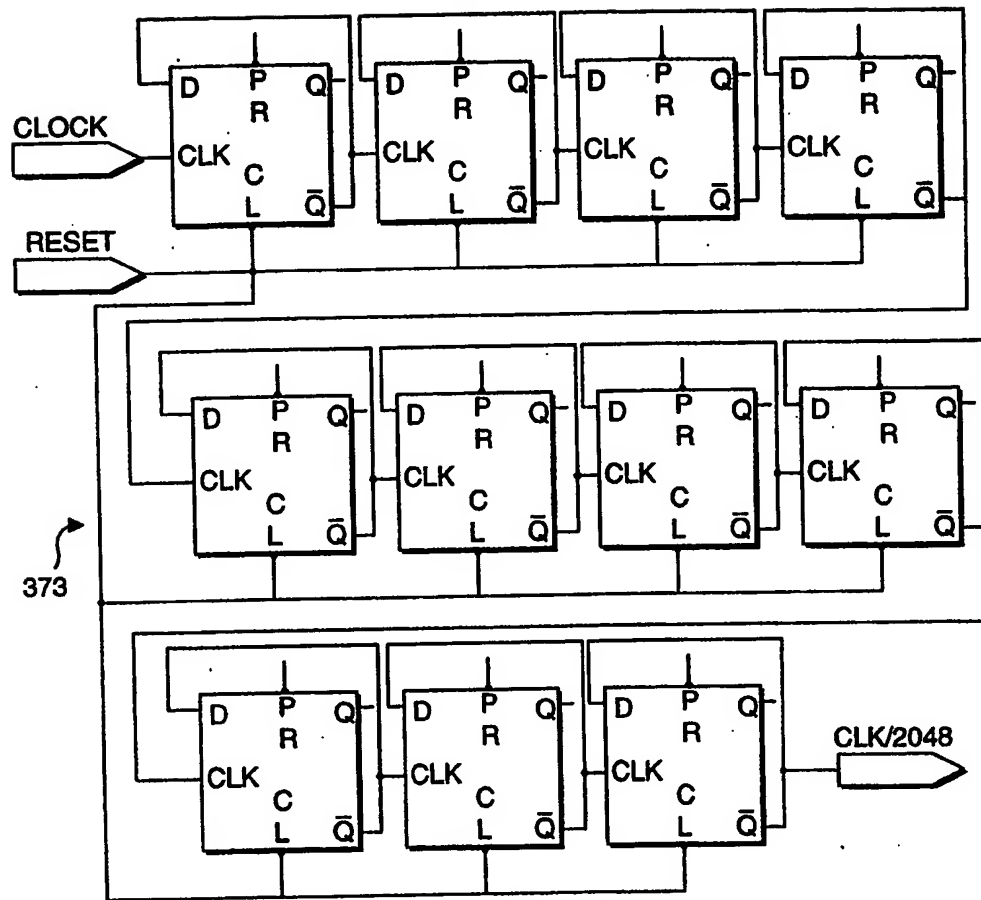


FIG. 15G

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$$\left. \begin{aligned} E_0 &= (B1 + A_0) (C_3 / C_{1-1}) \\ E_1 &= (C_3 / C_{1-2}) + B1 \\ E_2 &= (C_2 / C_1) (T_1) \end{aligned} \right\}$$

FIG. 15H

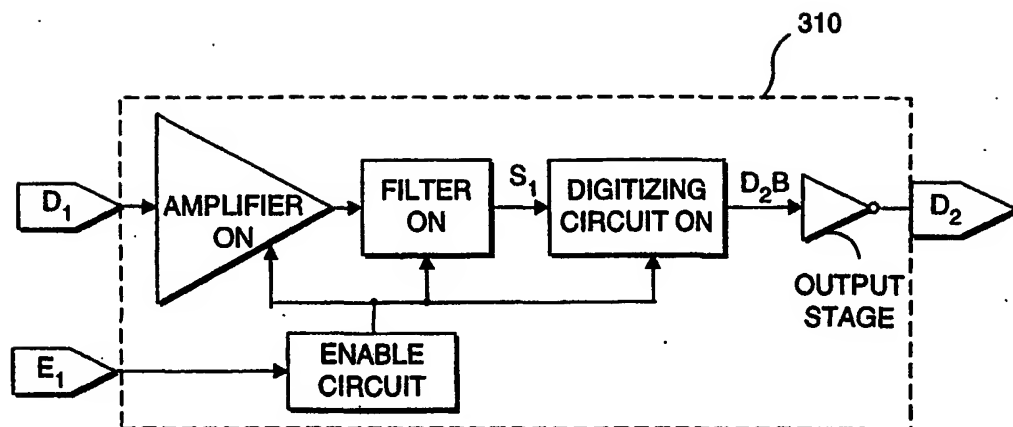


FIG. 15I

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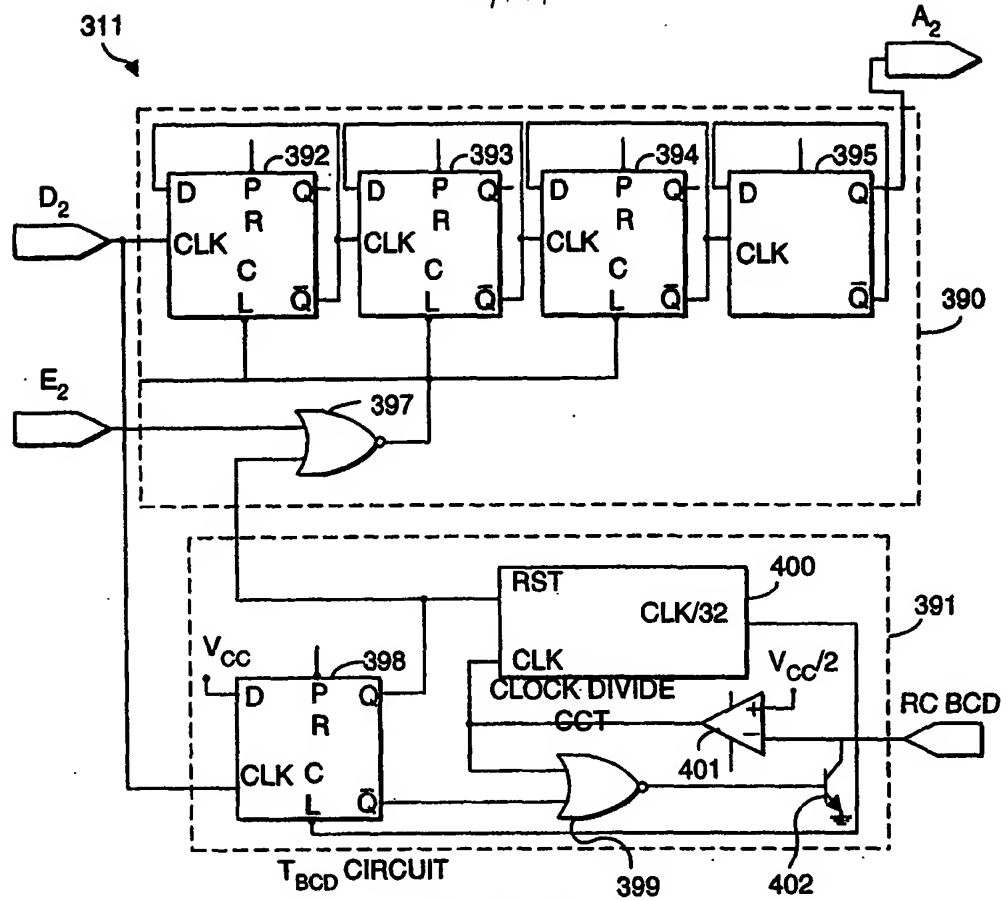


FIG. 15J

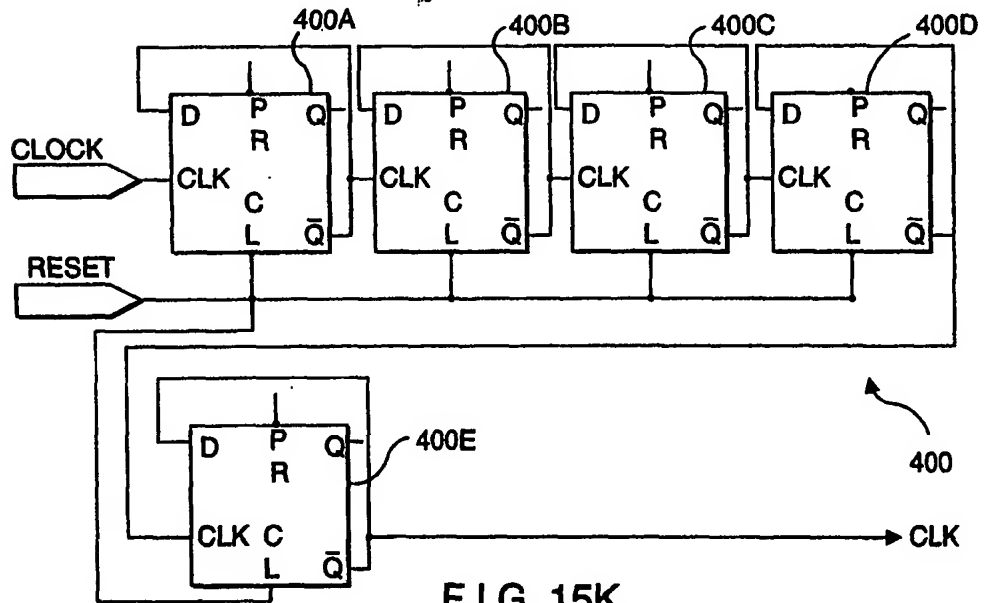


FIG. 15K

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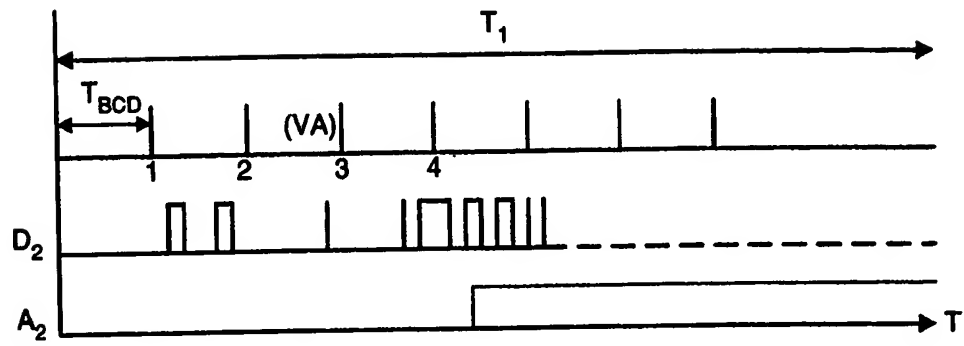


FIG. 15L

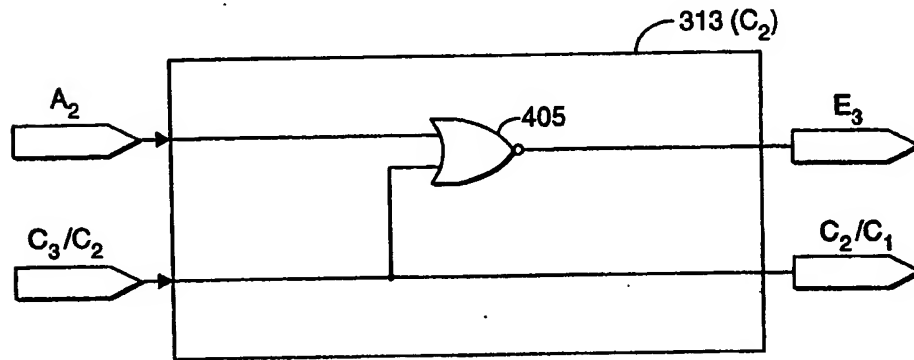


FIG. 15M

C_3/C_2	A_2	E_3	C_2/C_1
0	0	0	0
0	1	1	0
1	X	1	1

X: DON'T CARE (I.E. C_3/C_2 OVERRIDES A_2)

FIG. 15N

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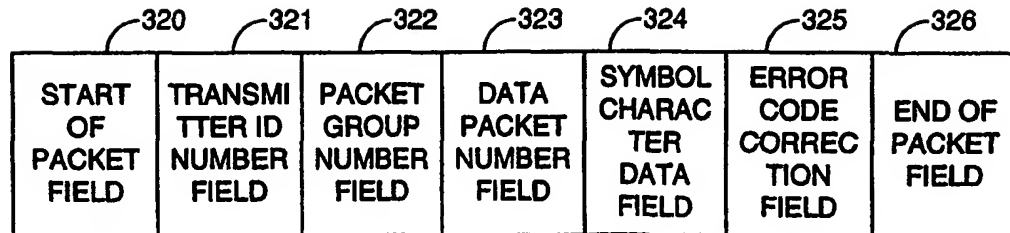


FIG. 150

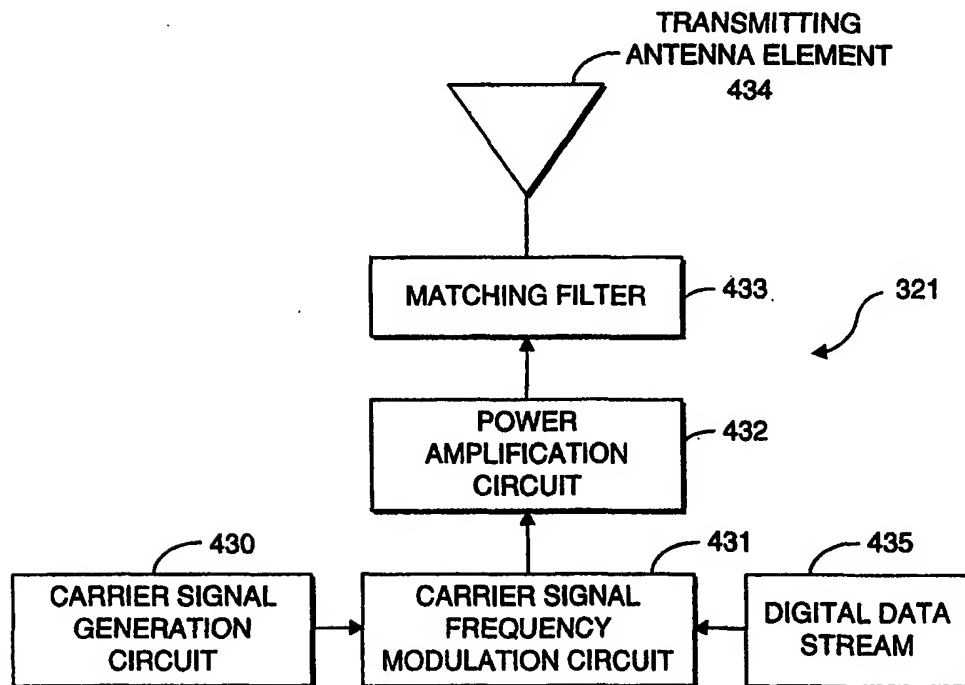


FIG. 16

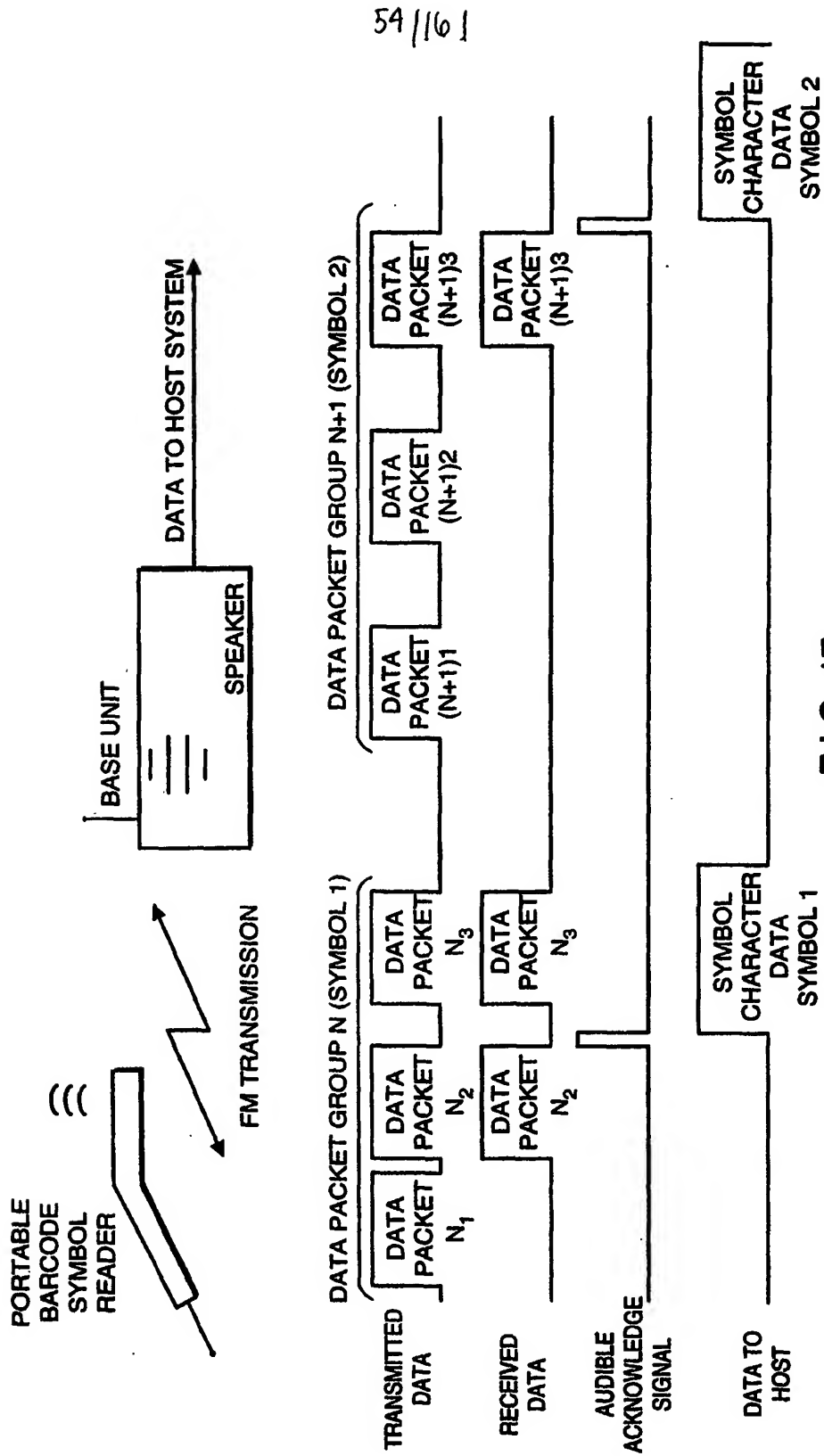


FIG. 17

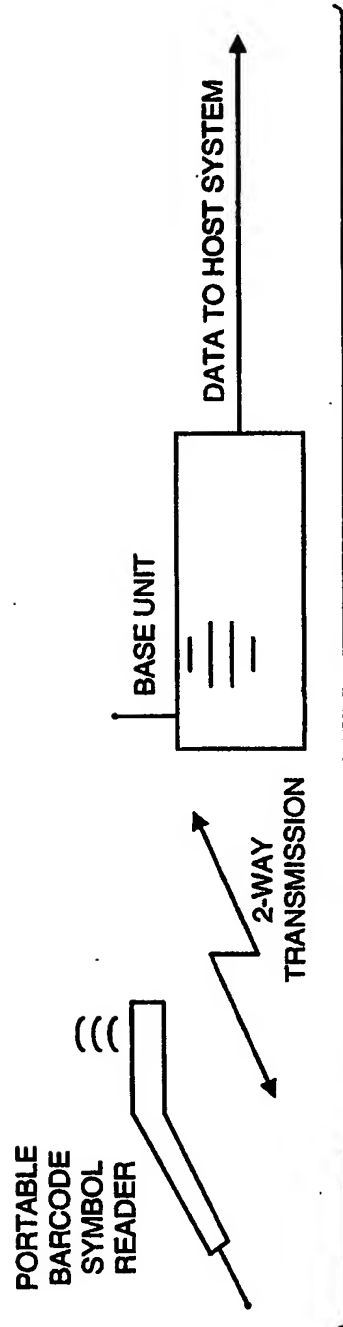


FIG. 18

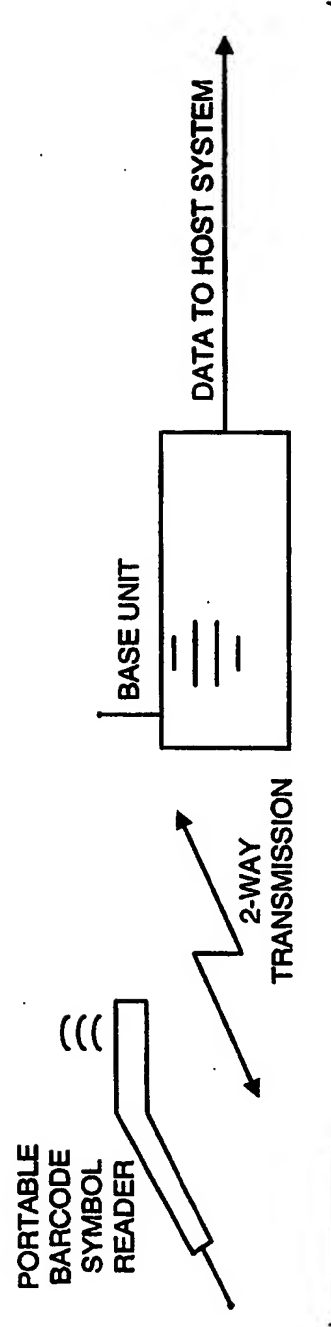


FIG. 19

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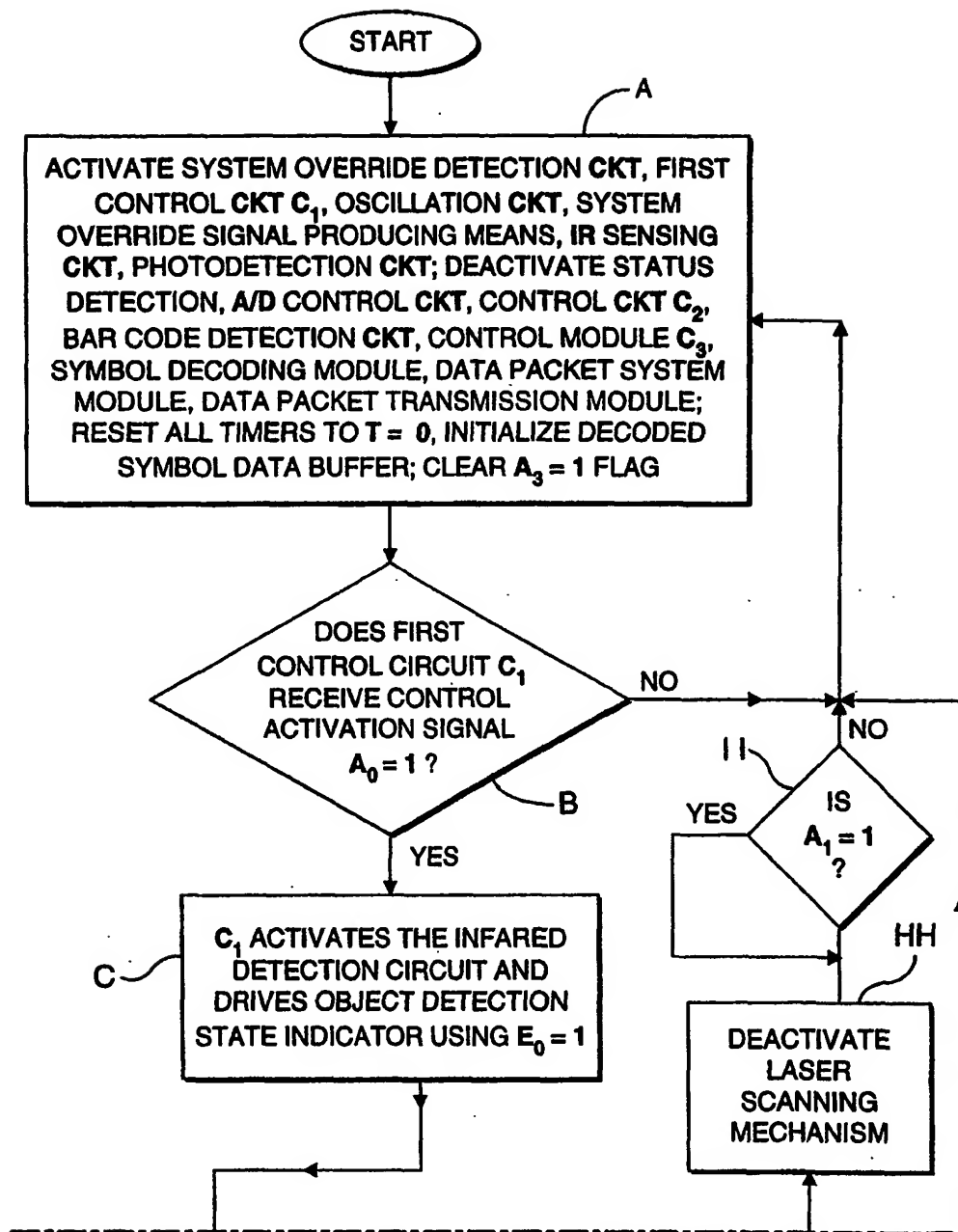


FIG. 20A1

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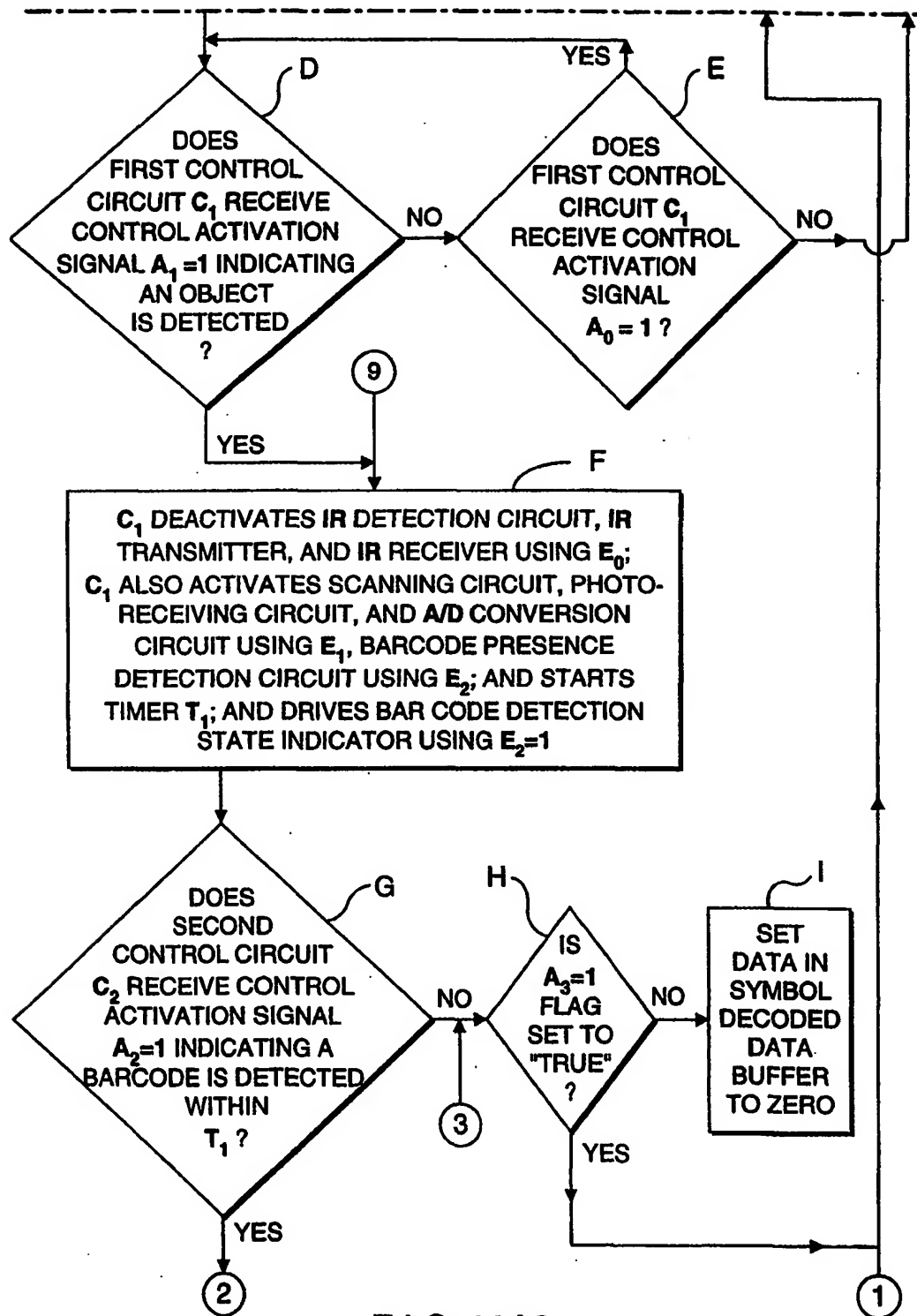


FIG. 20A2

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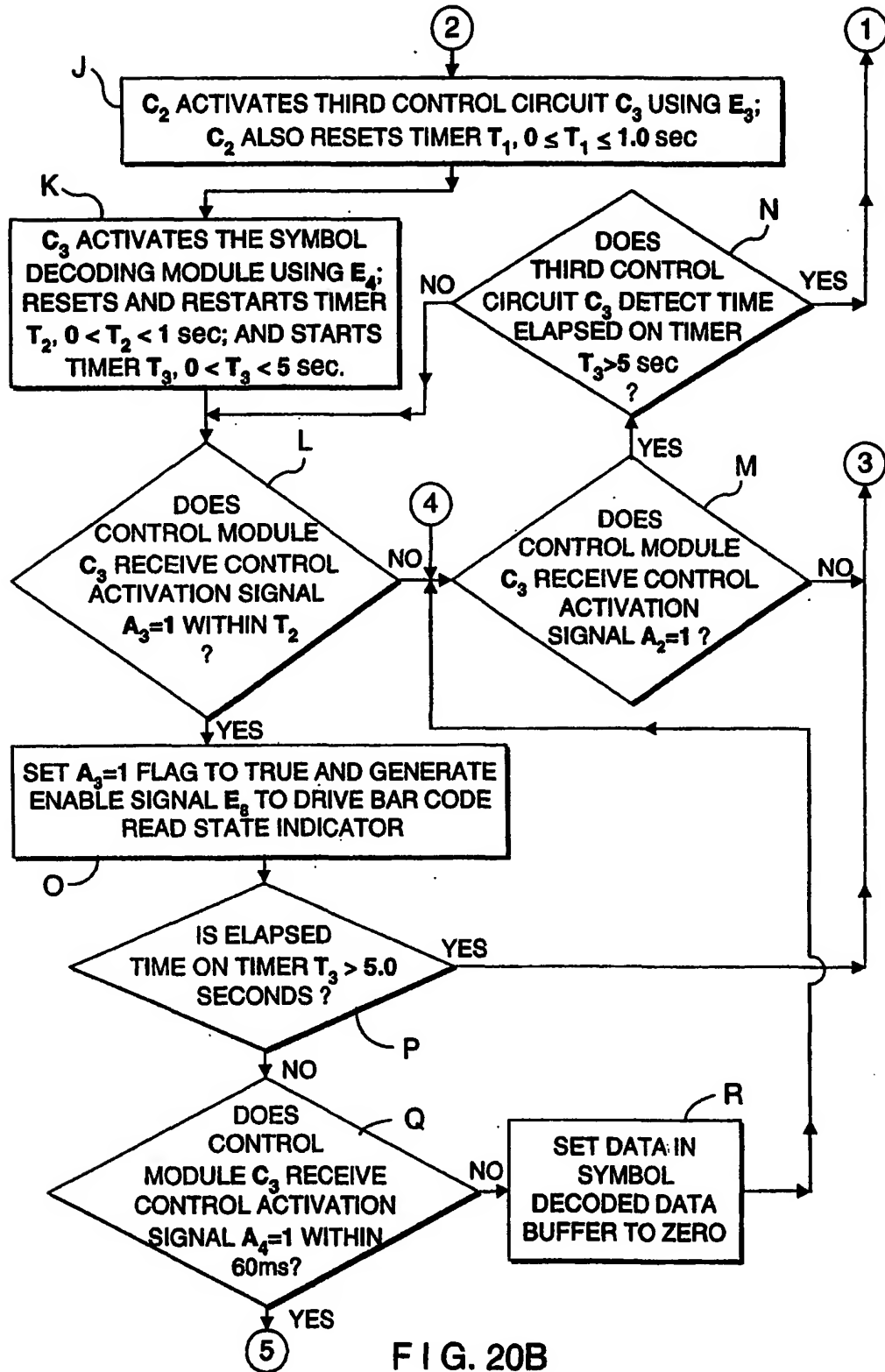


FIG. 20B

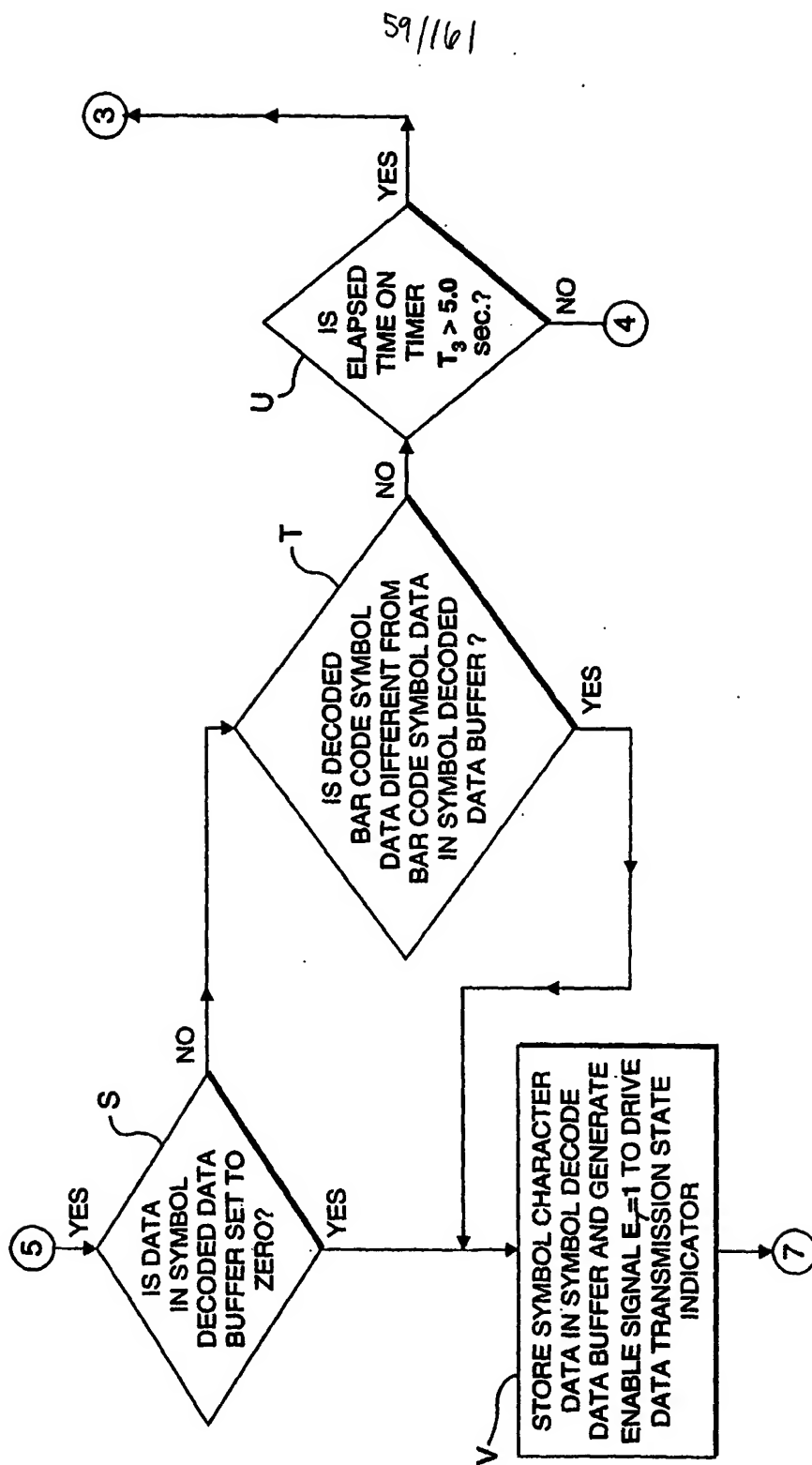


FIG. 20C

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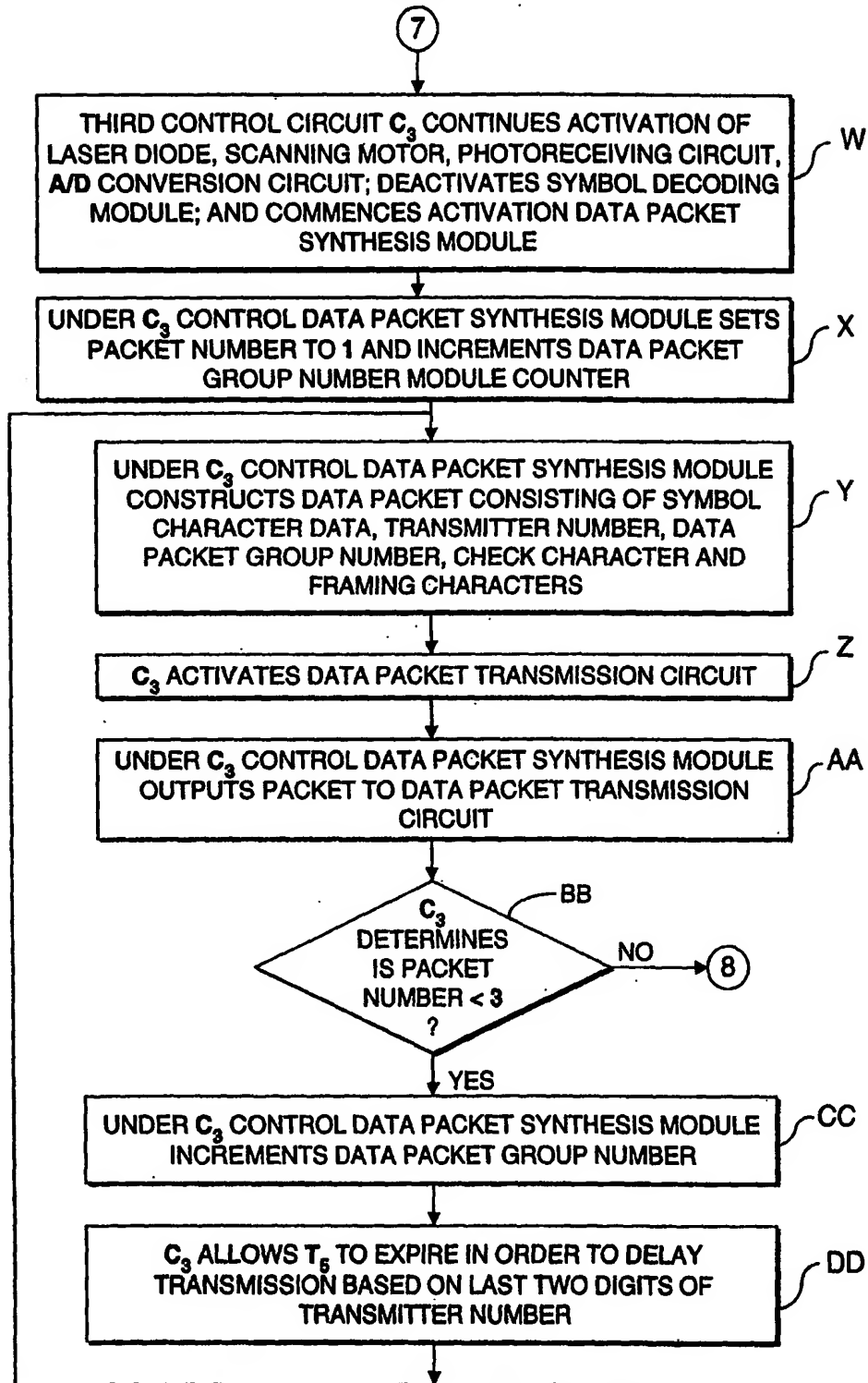


FIG. 20D

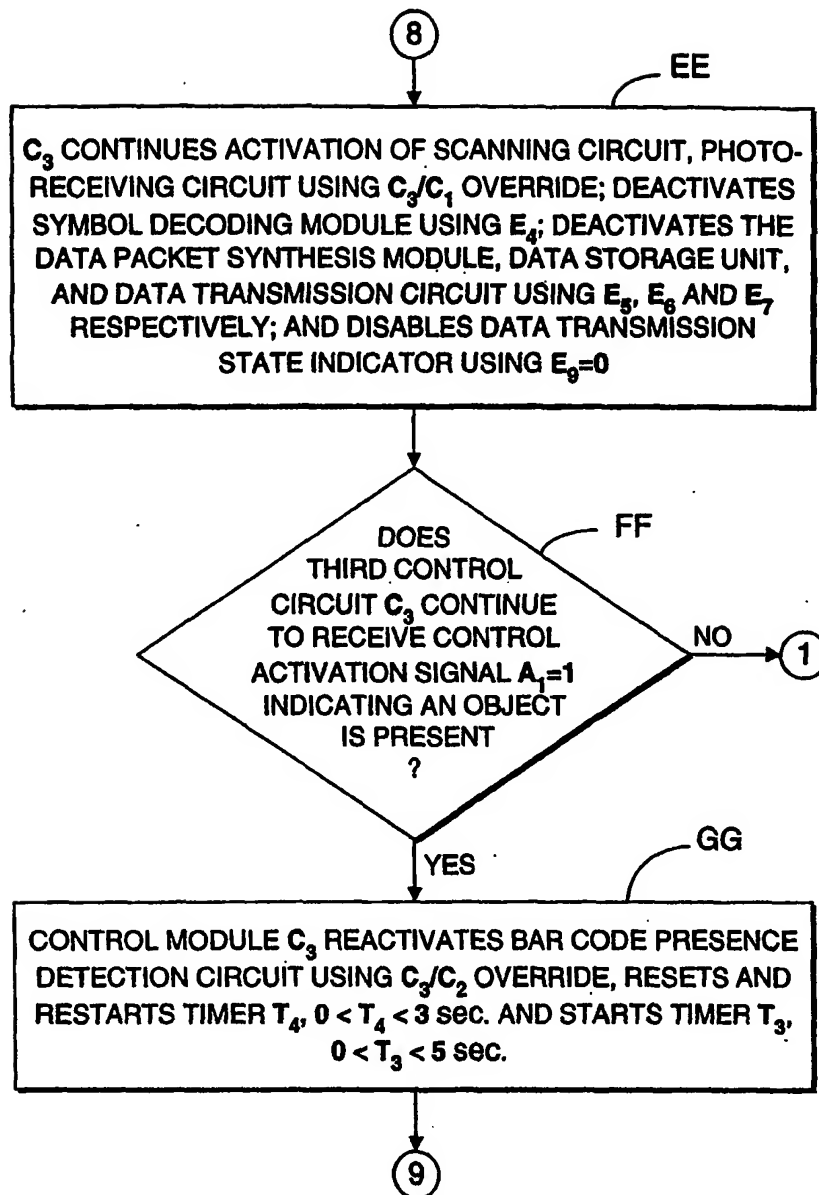


FIG. 20E

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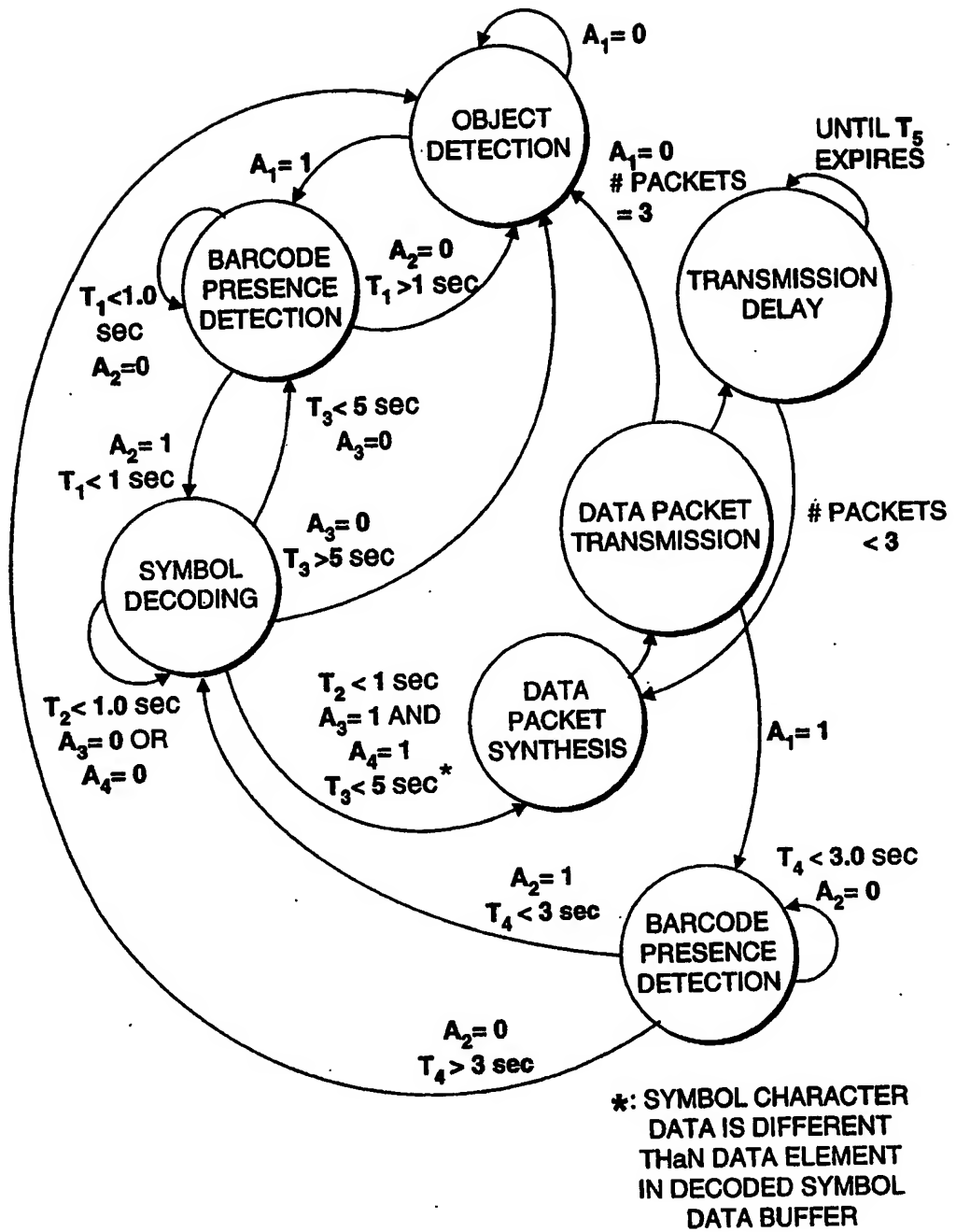


FIG. 21

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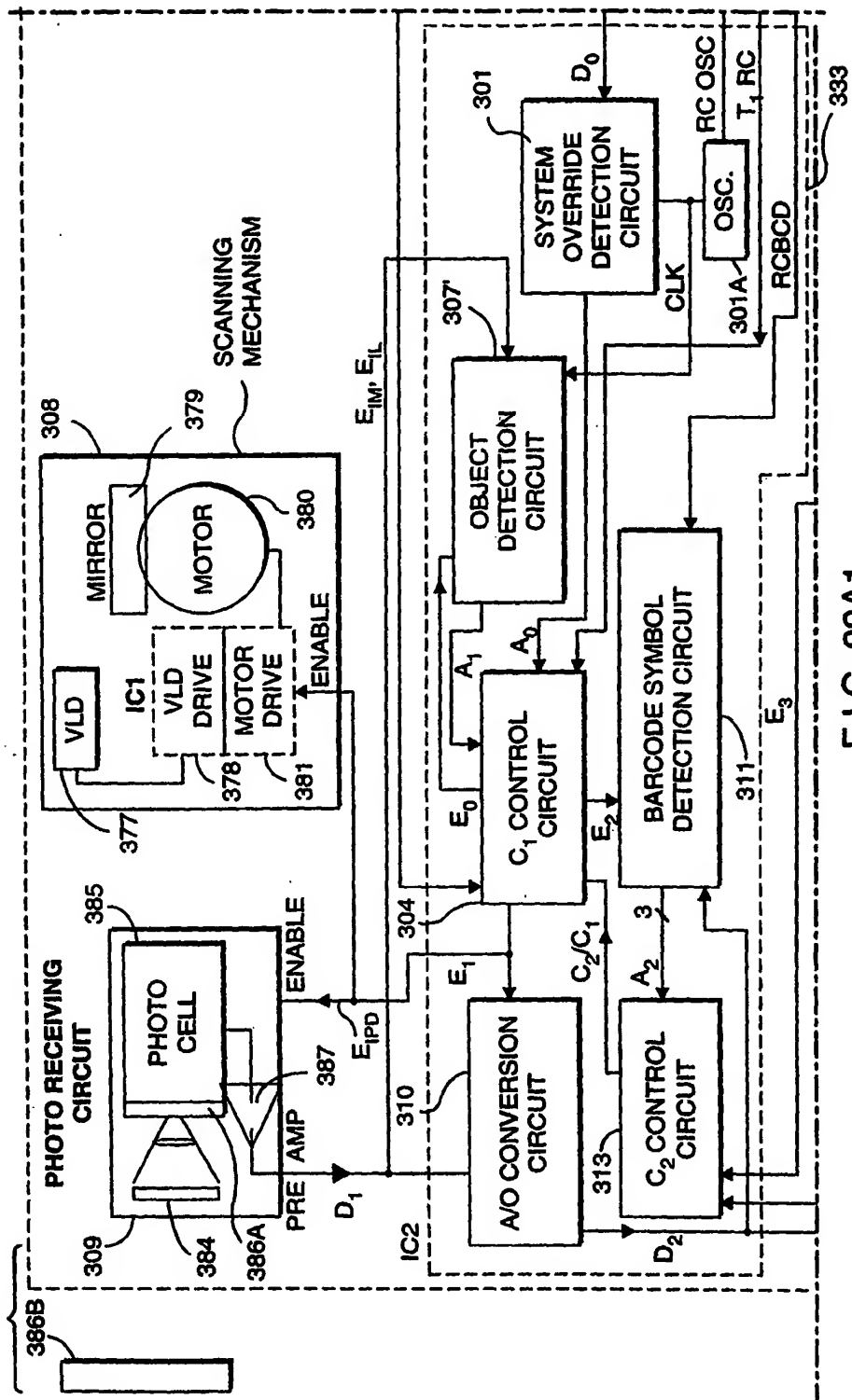


FIG. 22A1

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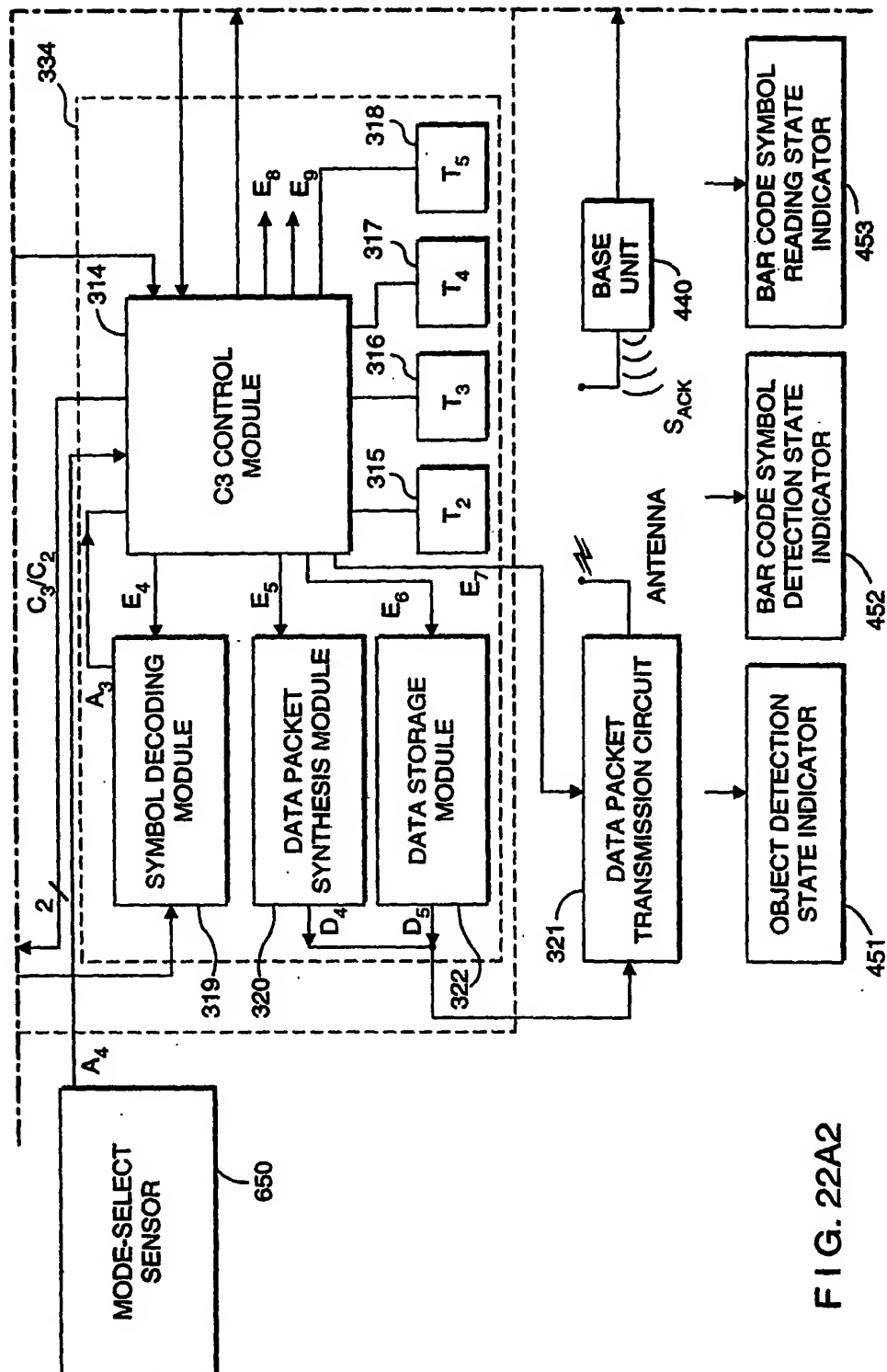


FIG. 22A2

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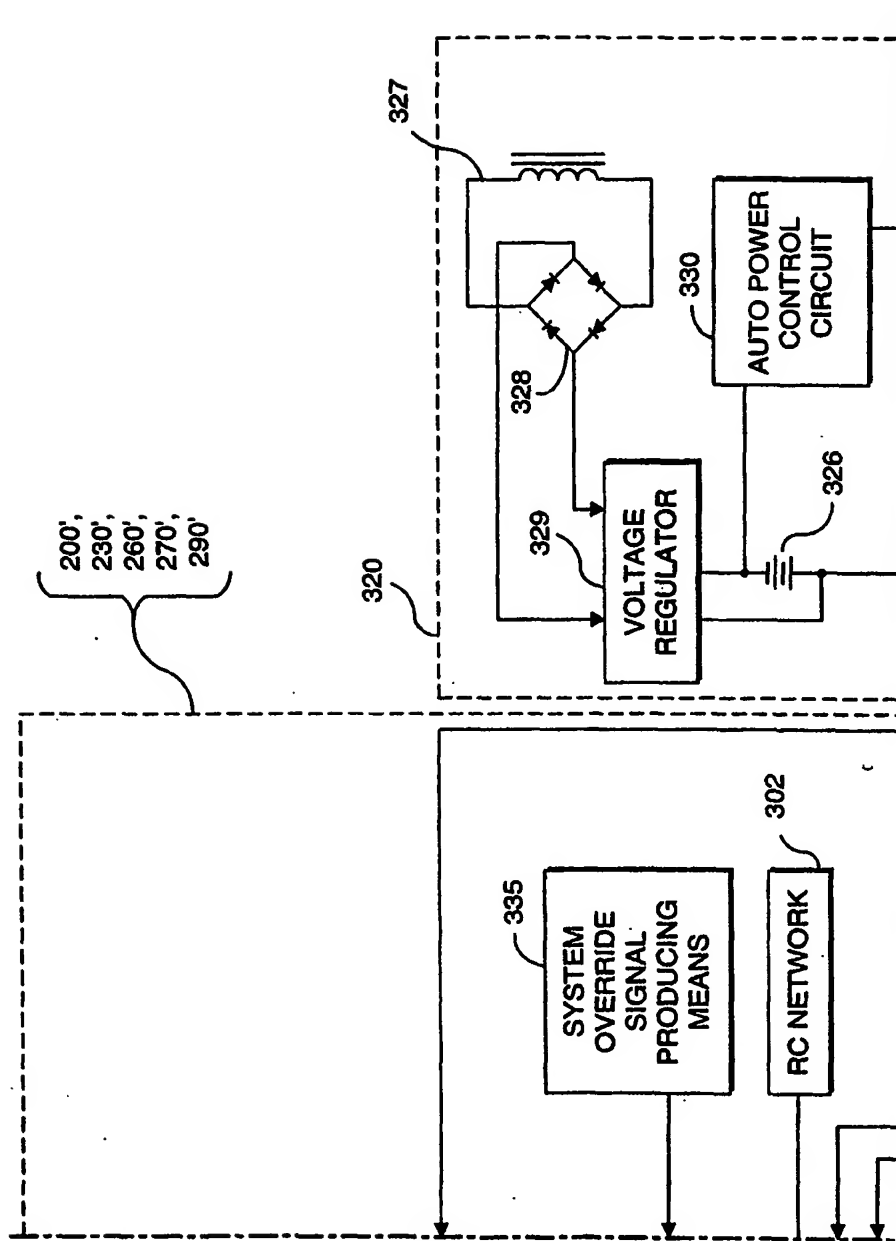


FIG. 22A3

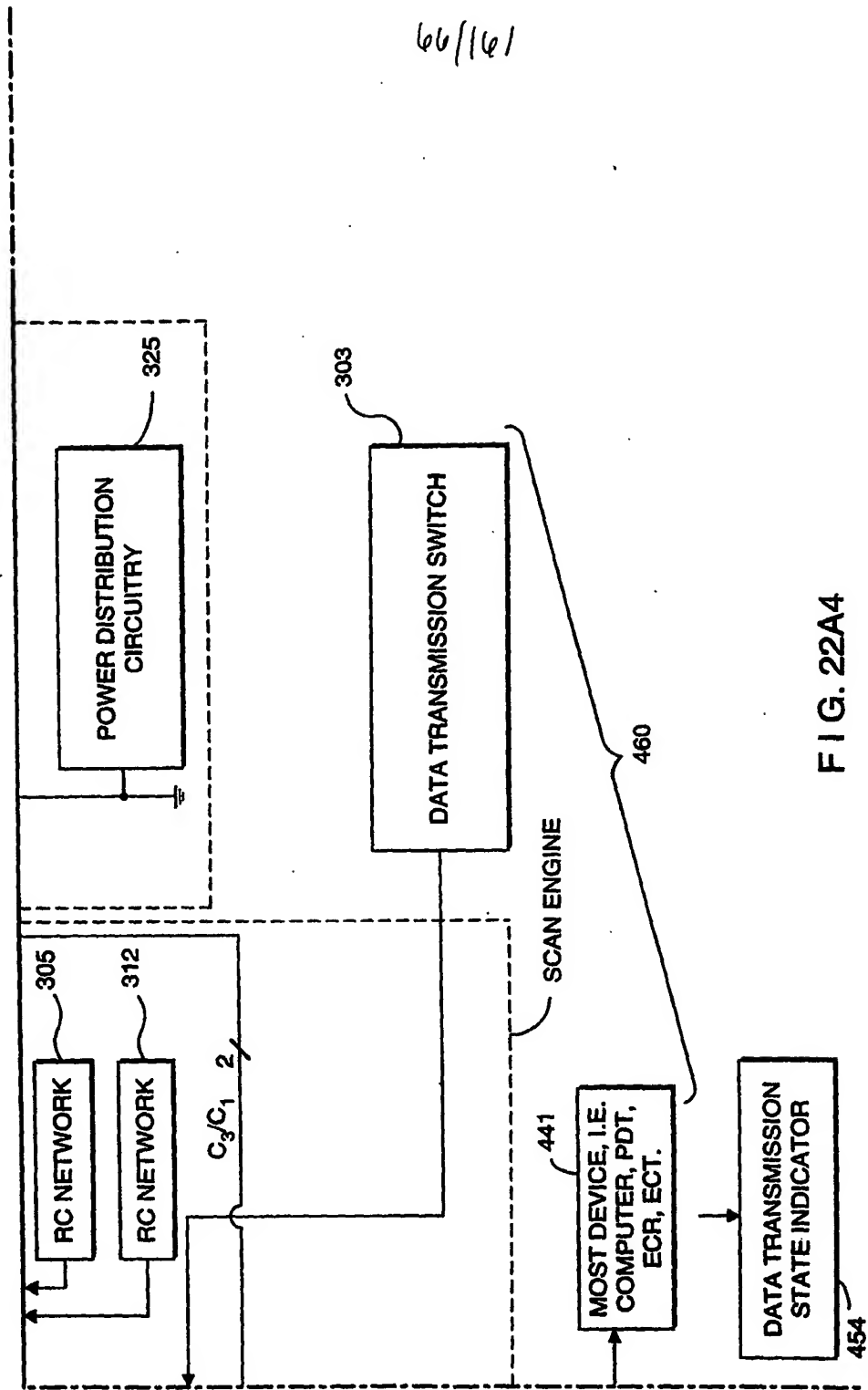


FIG. 22A4

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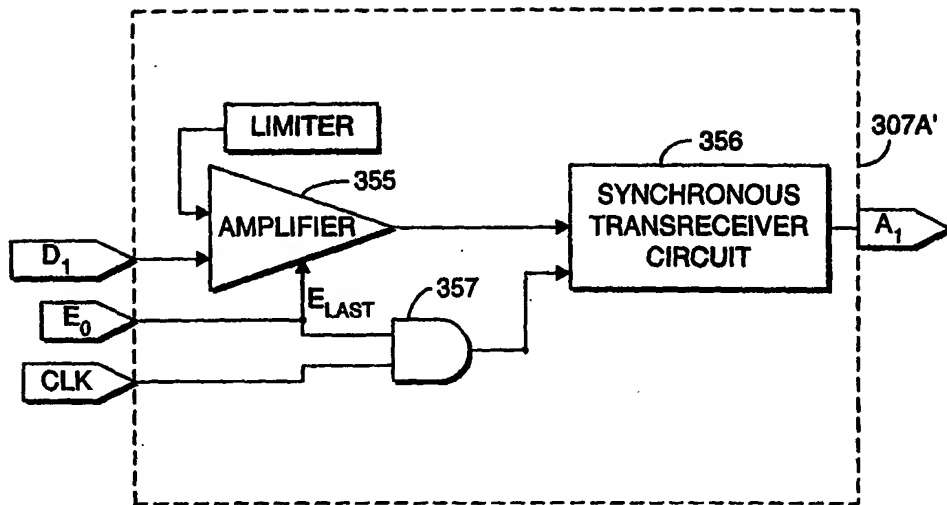


FIG. 22B

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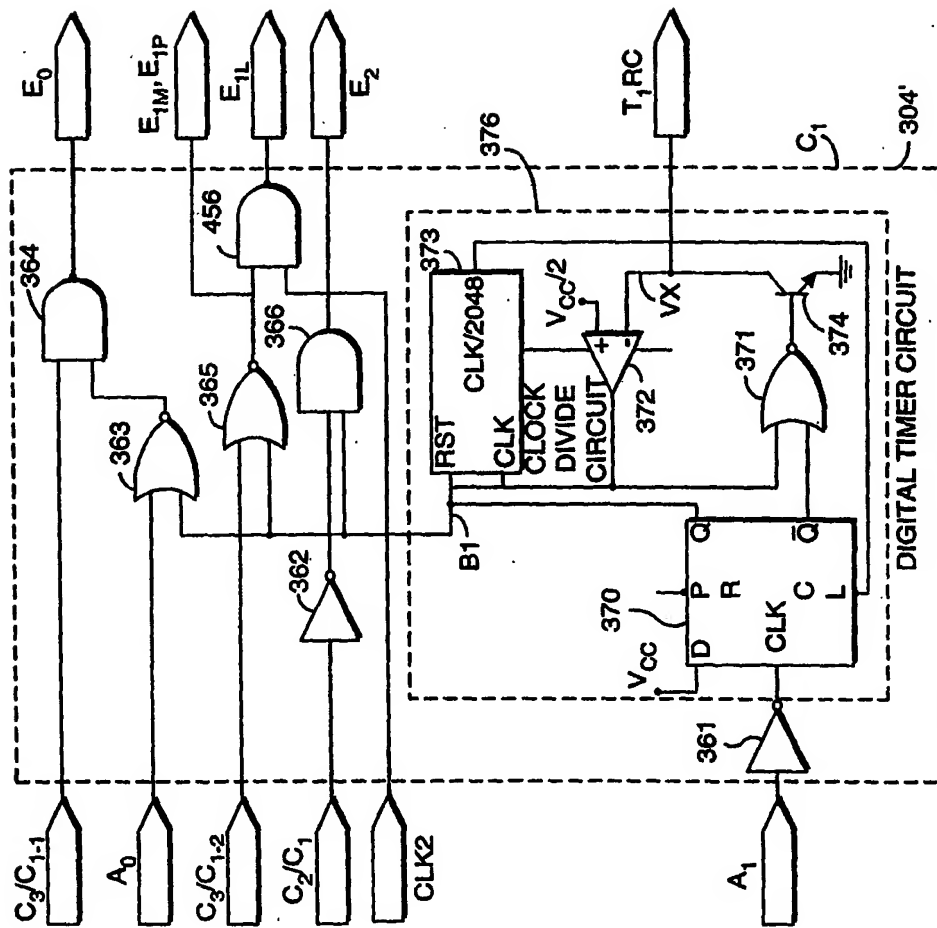


FIG. 22C

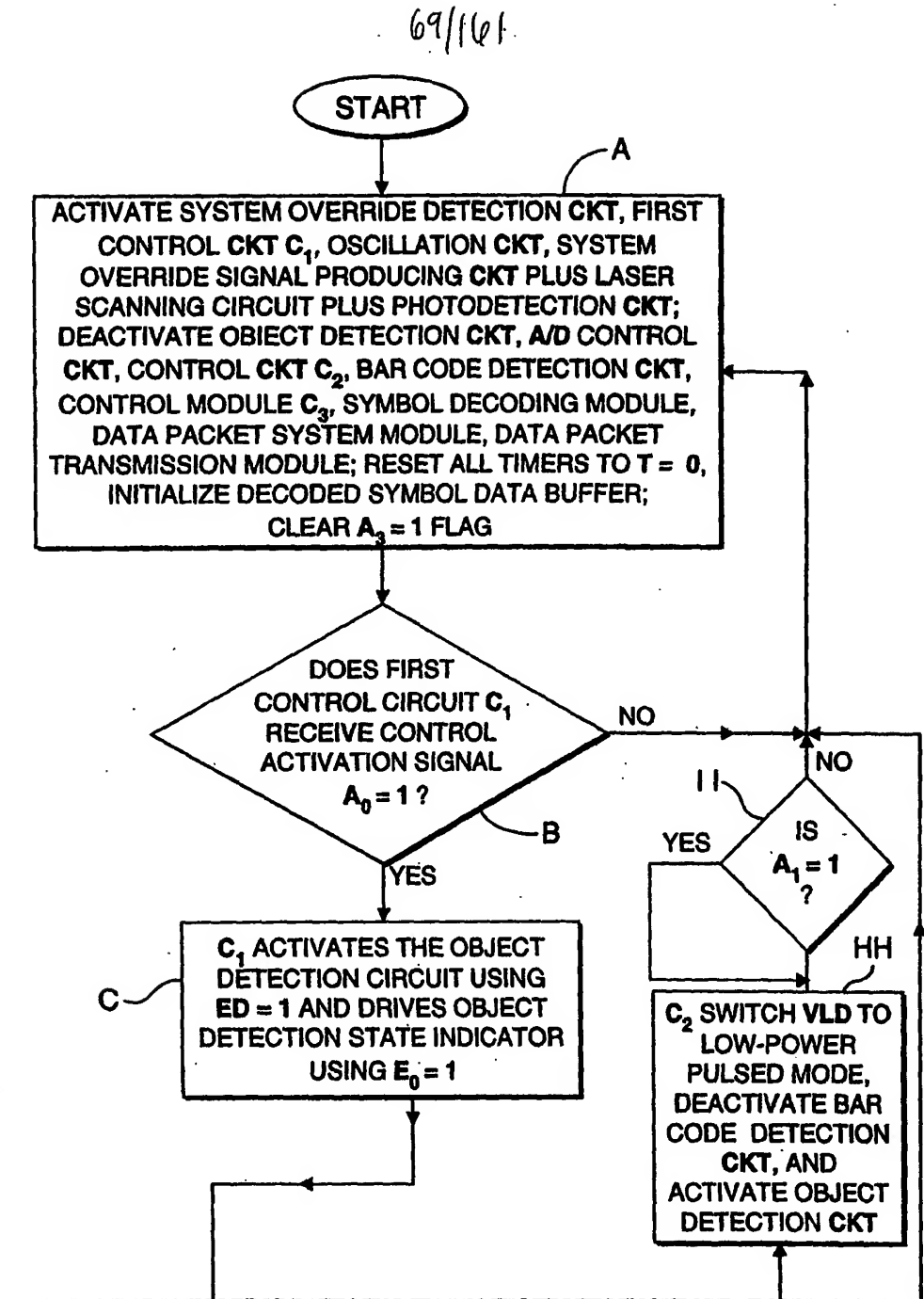
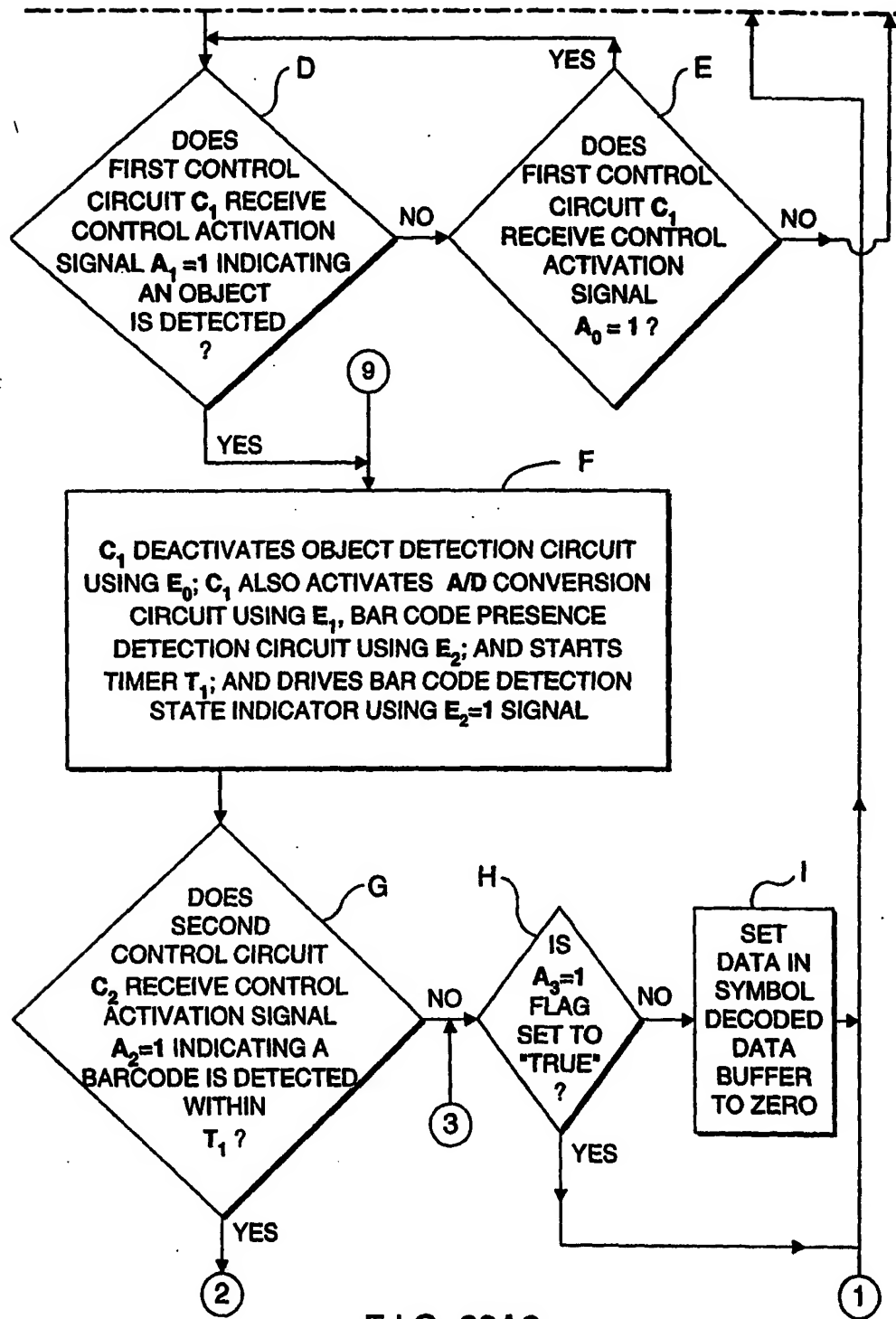
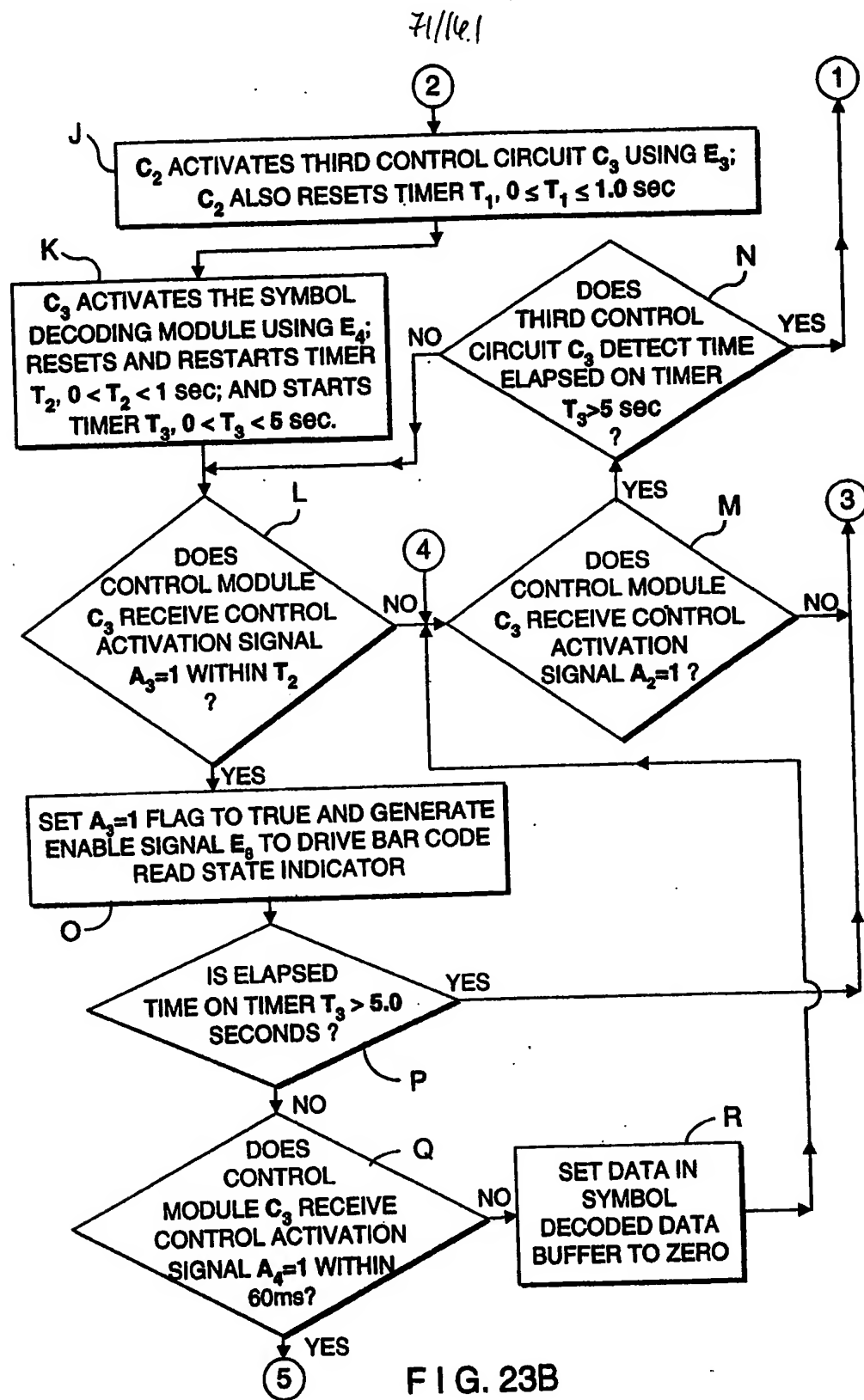


FIG. 23A1

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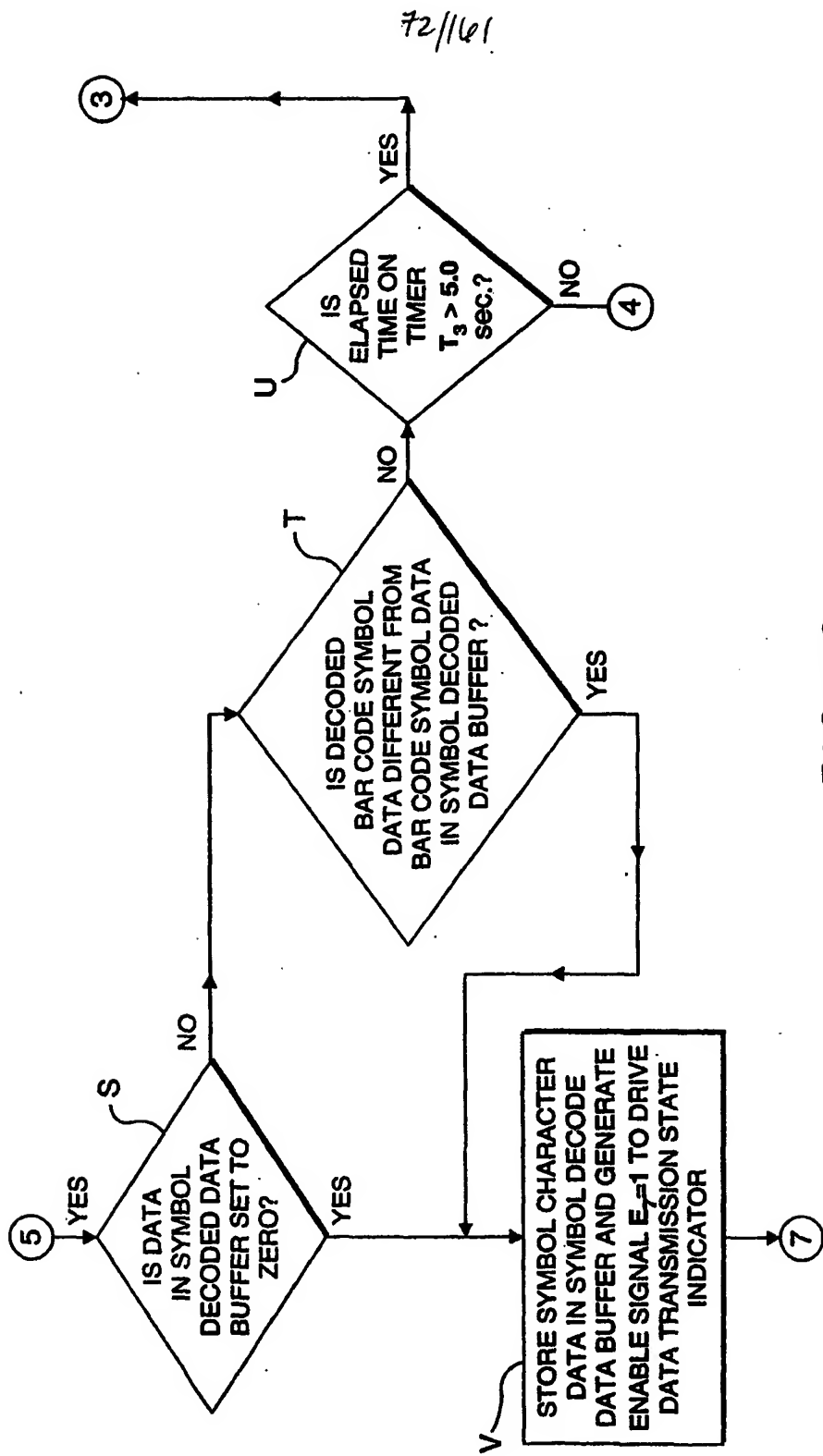


FIG. 23C

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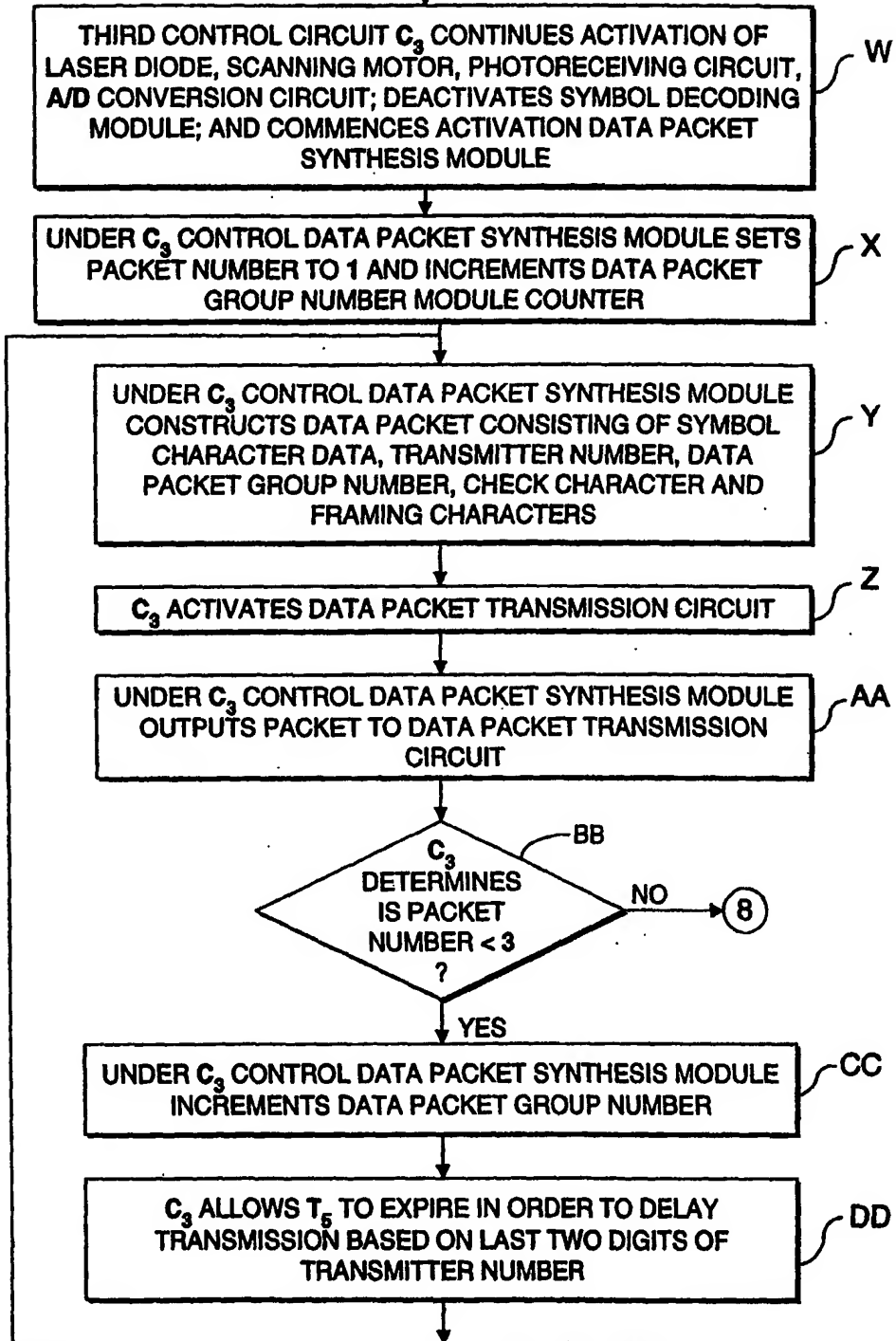


FIG. 23D

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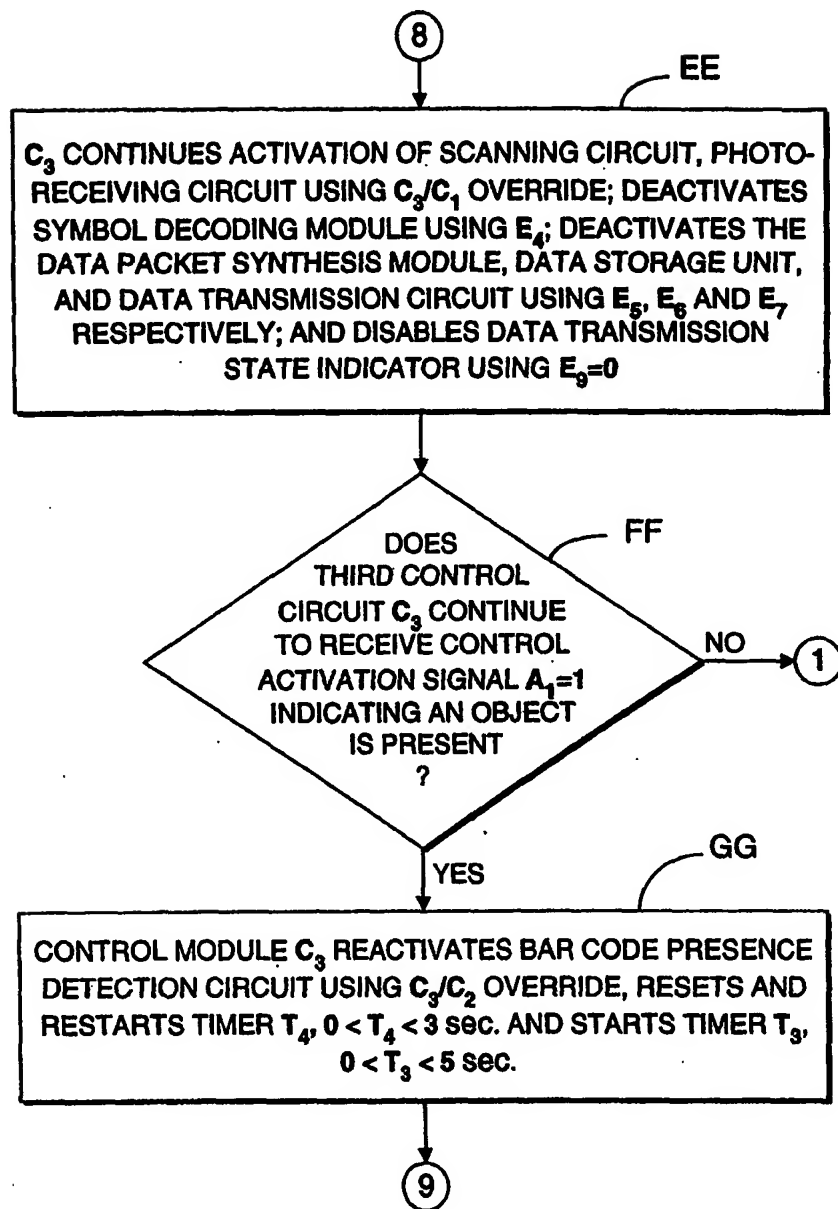


FIG. 23E

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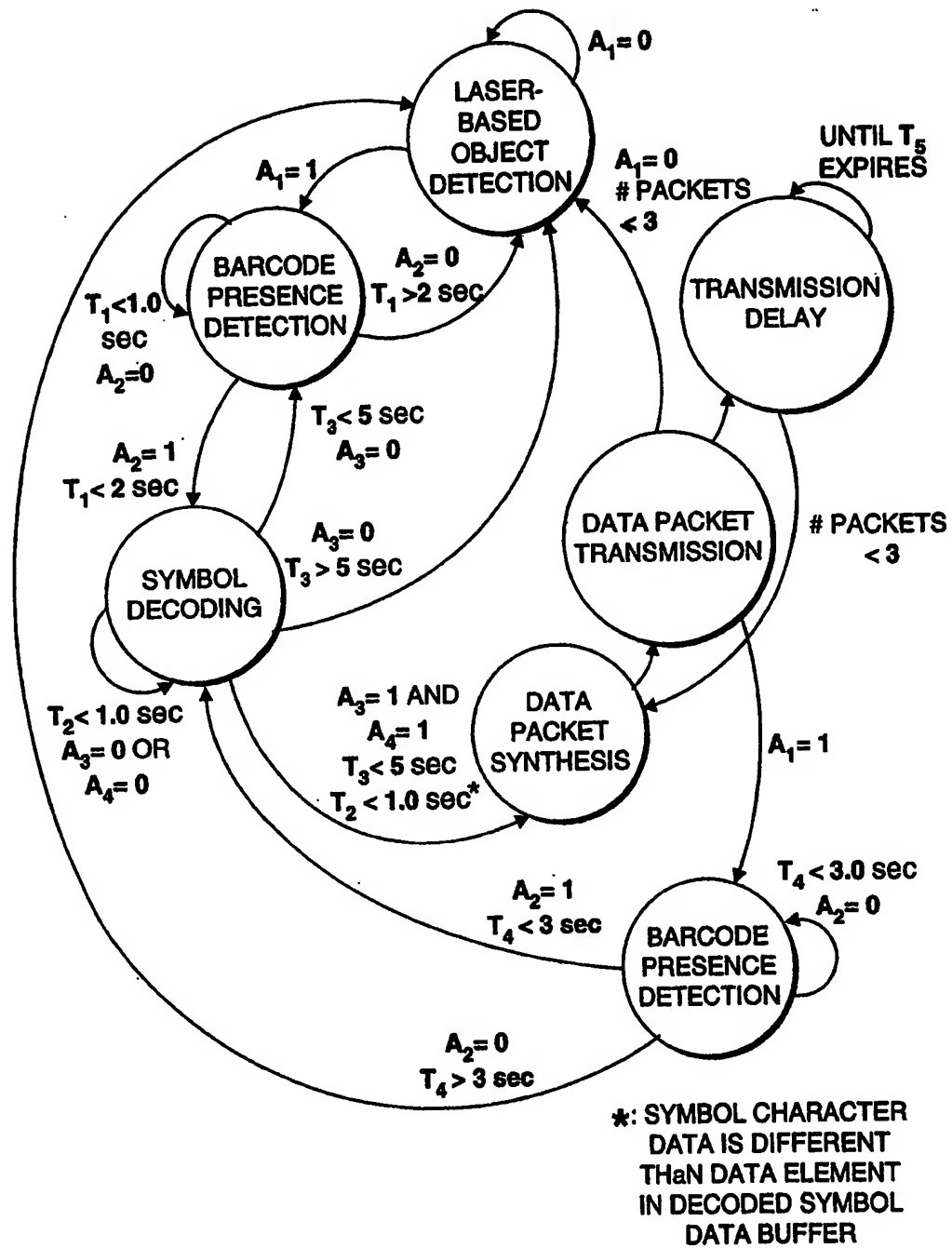


FIG. 24

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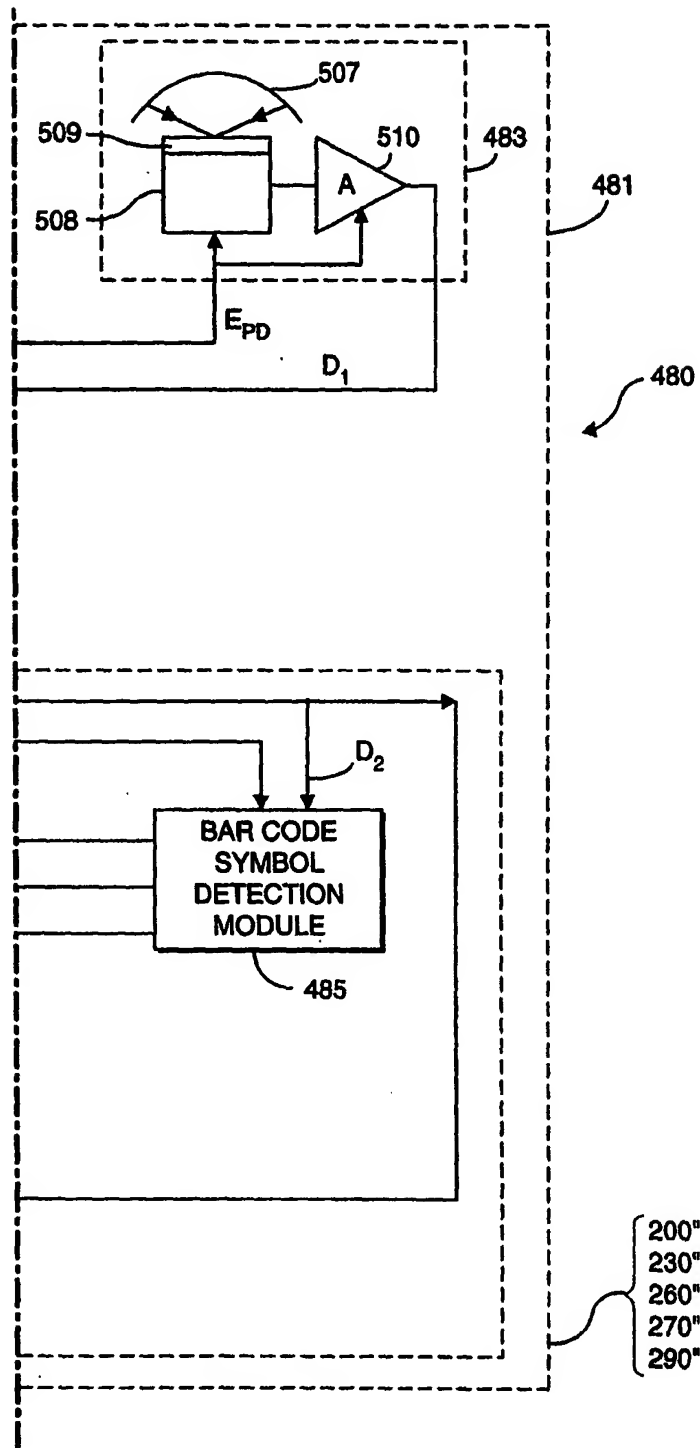
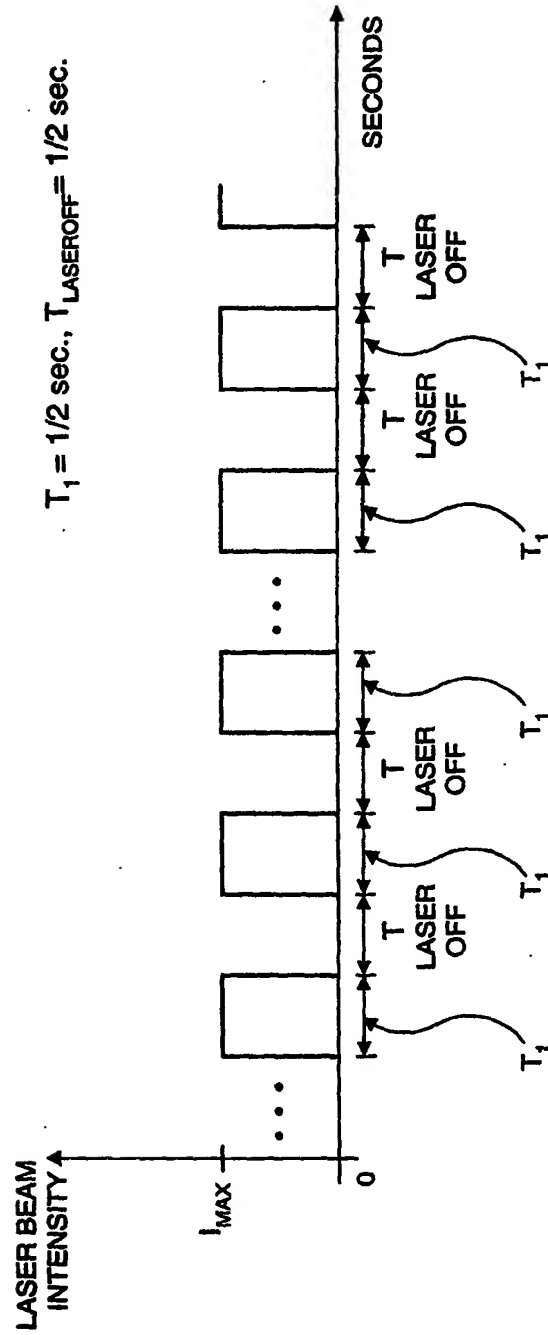


FIG. 25B



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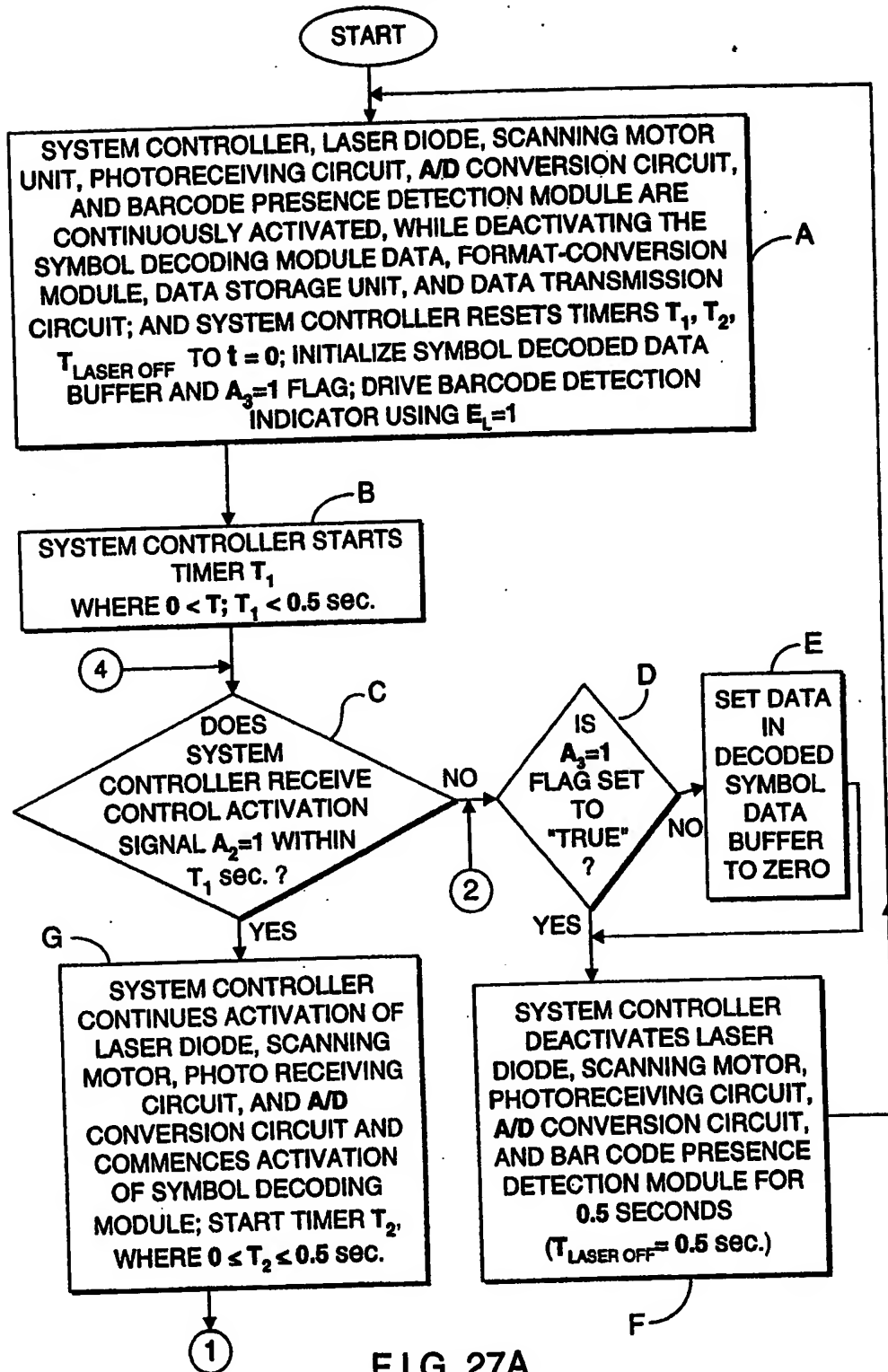


FIG. 27A

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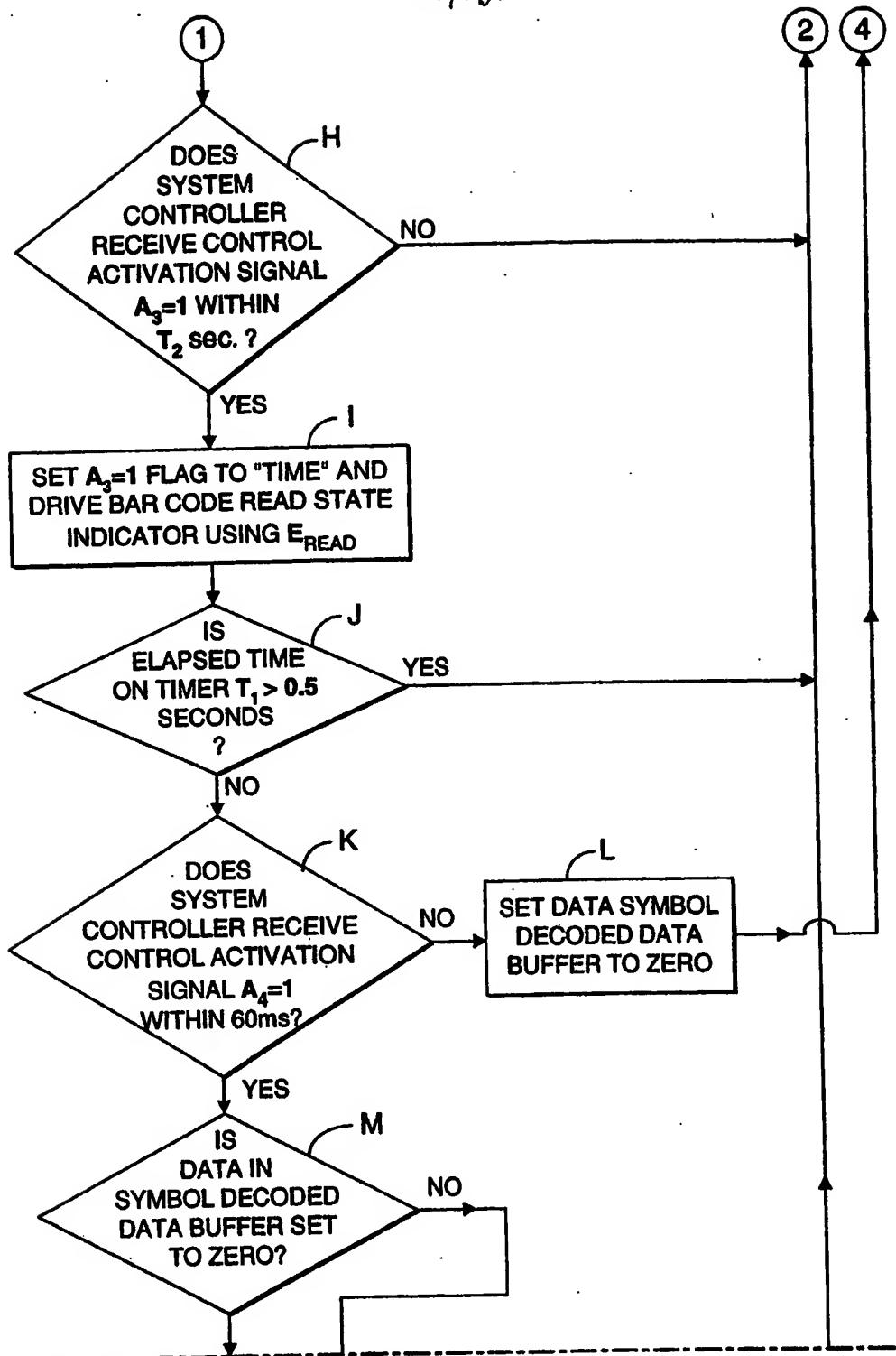


FIG. 27B1

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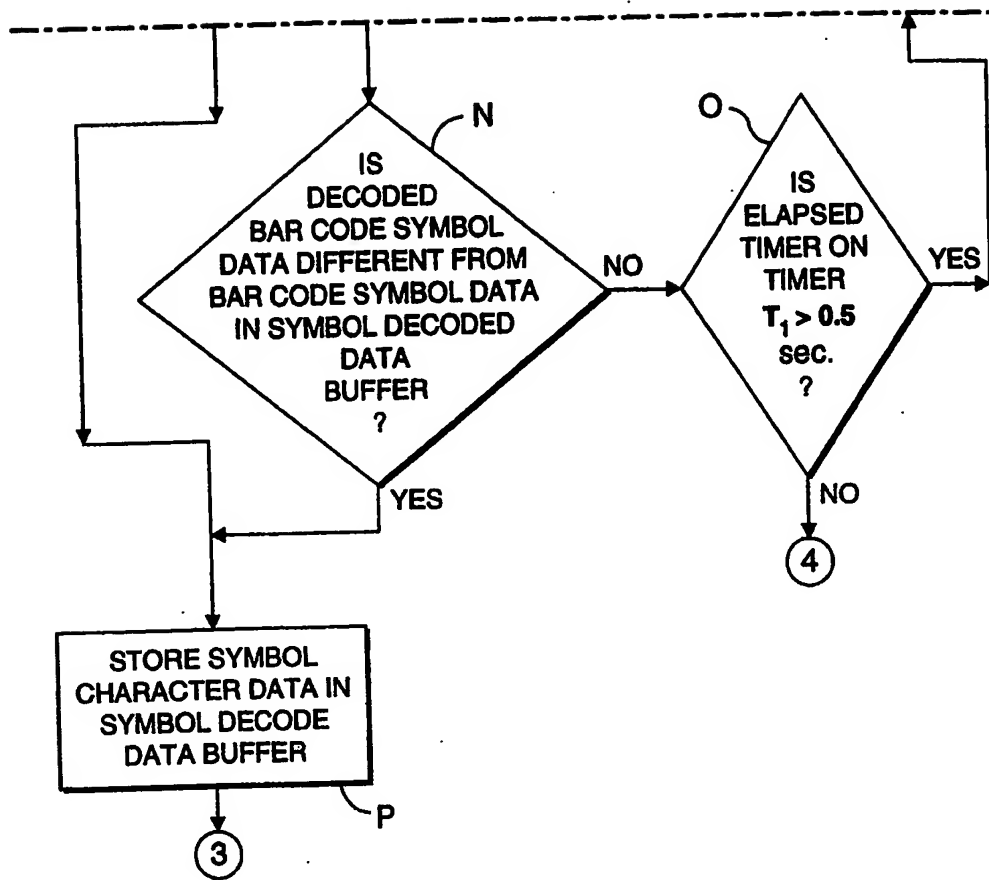


FIG. 27B2

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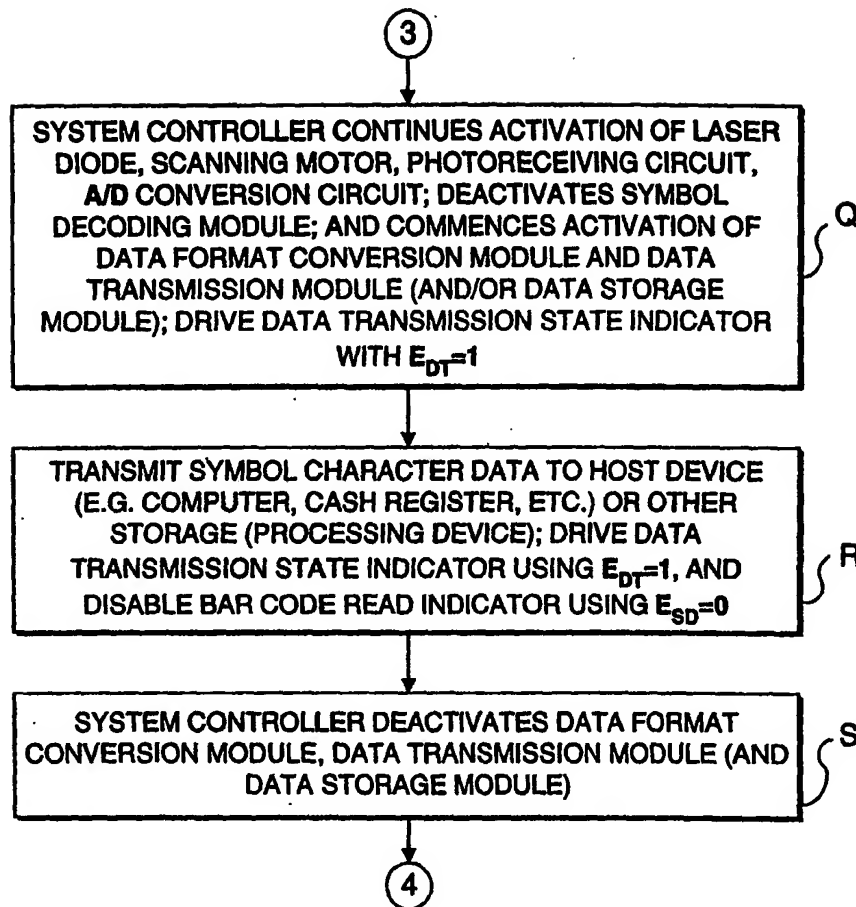


FIG. 27C

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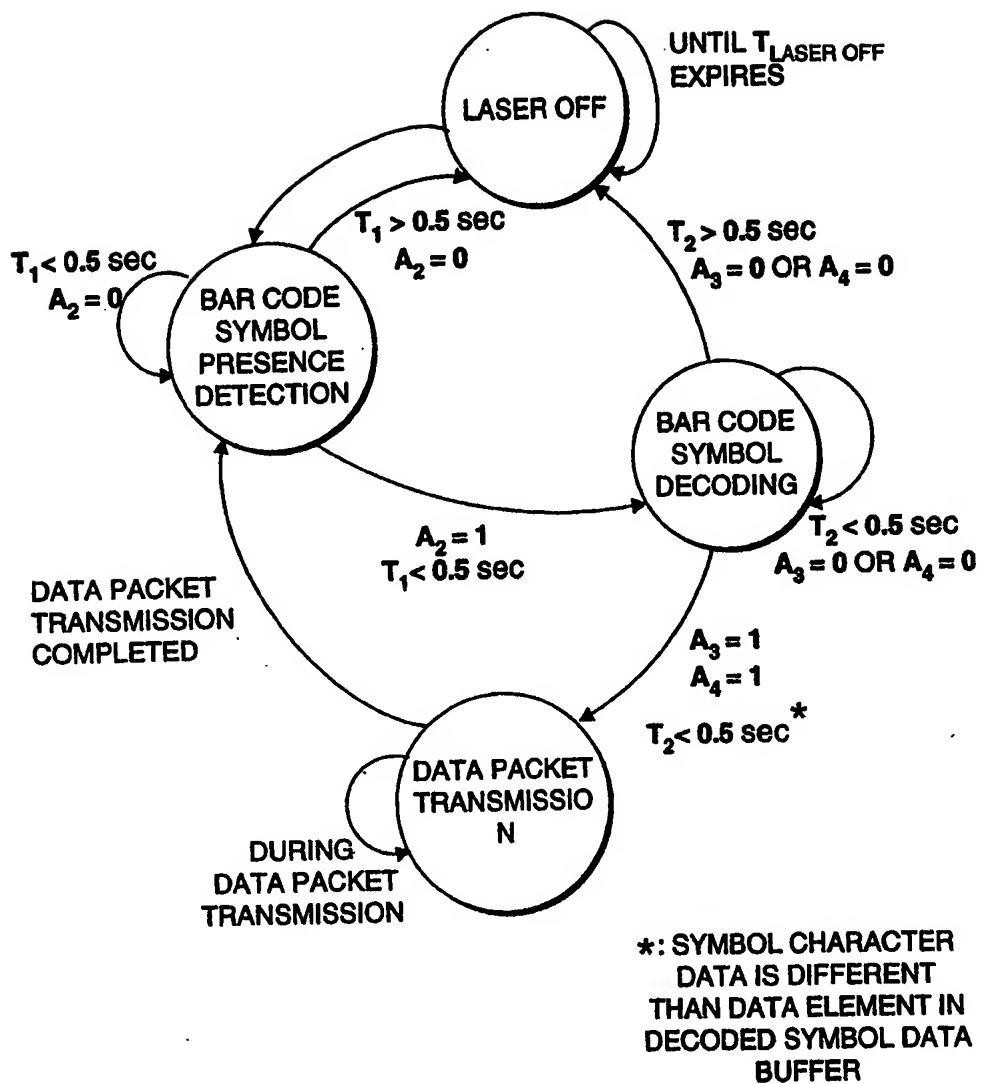


FIG. 28

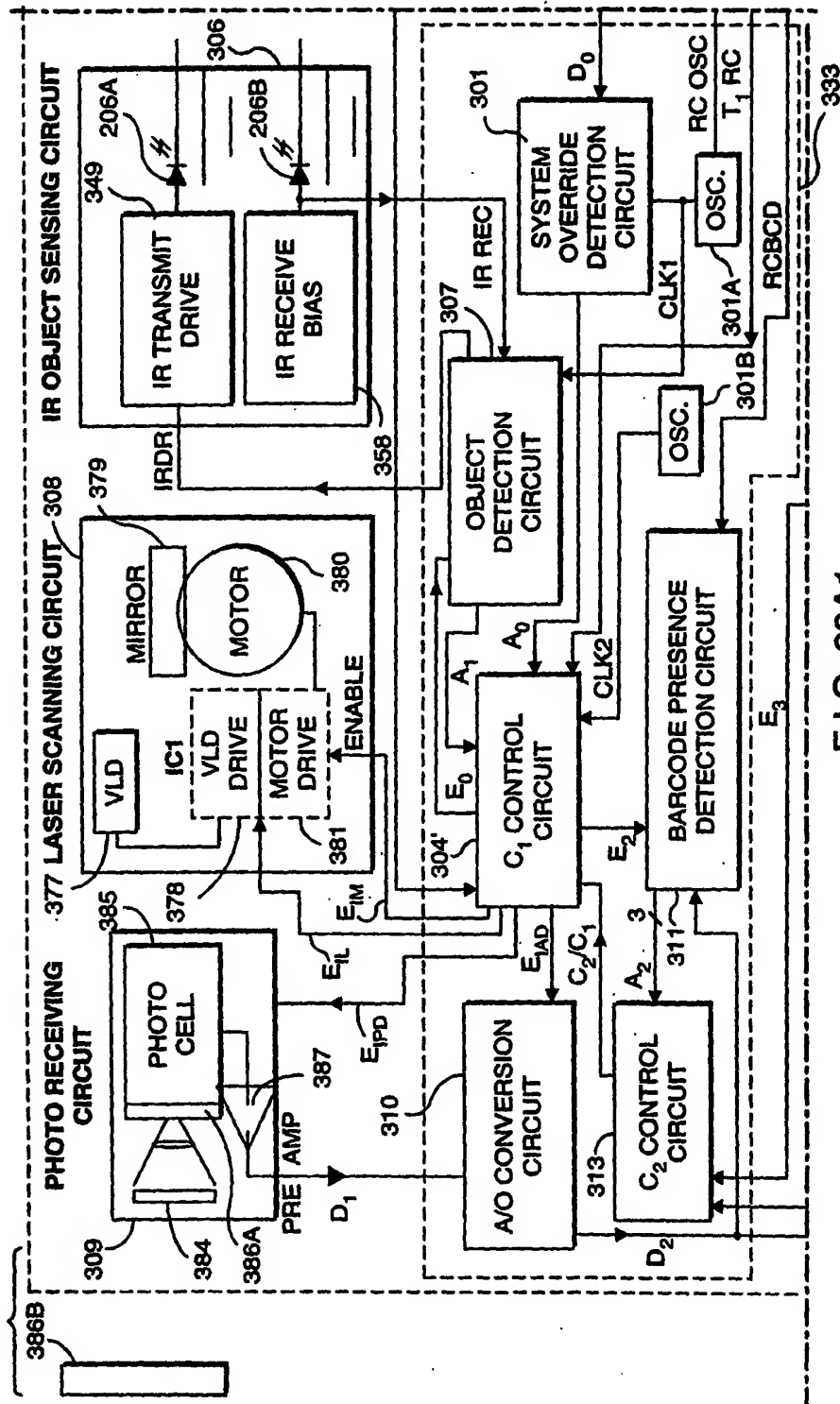


FIG. 29A1

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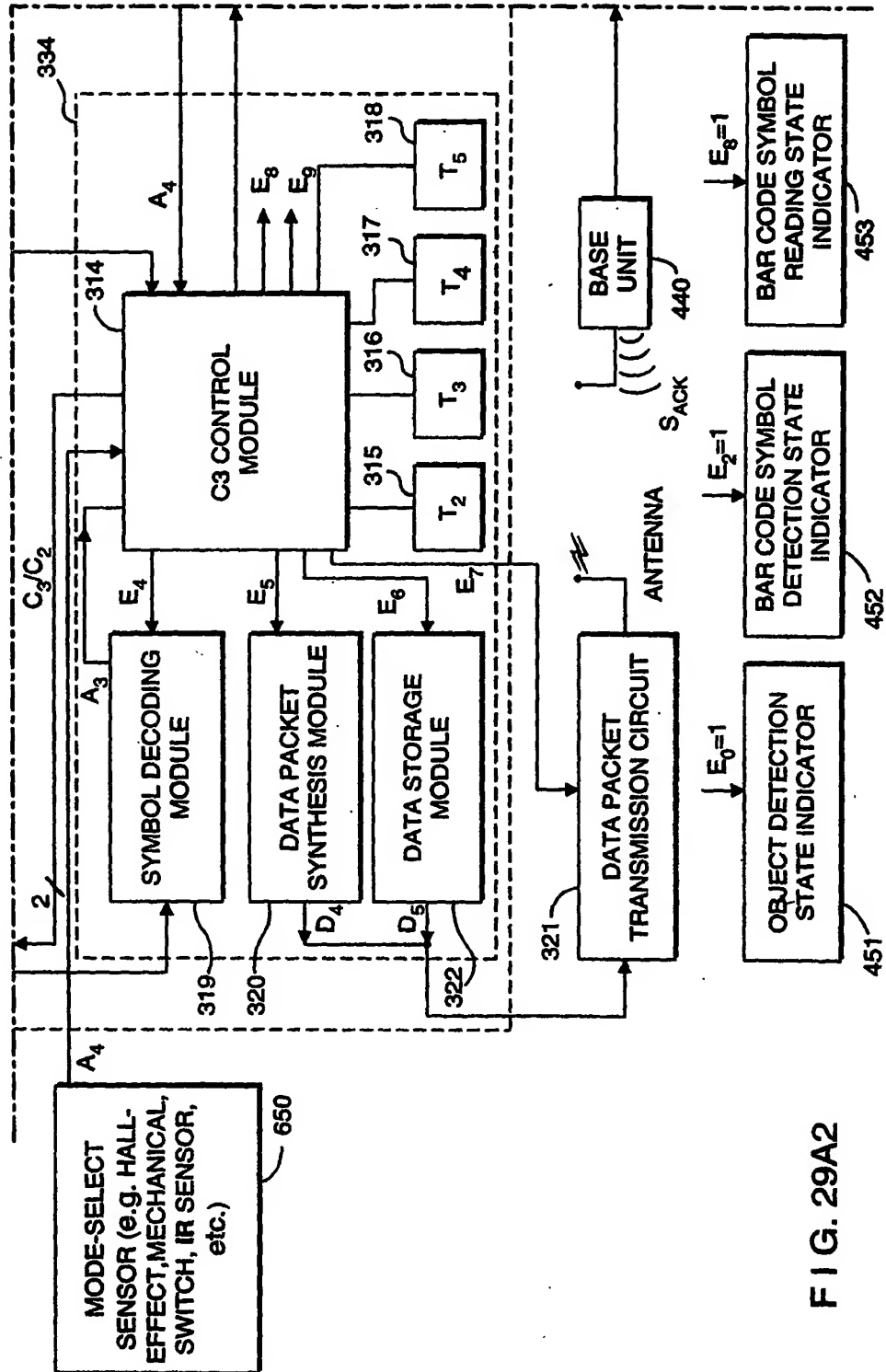


FIG. 29A2

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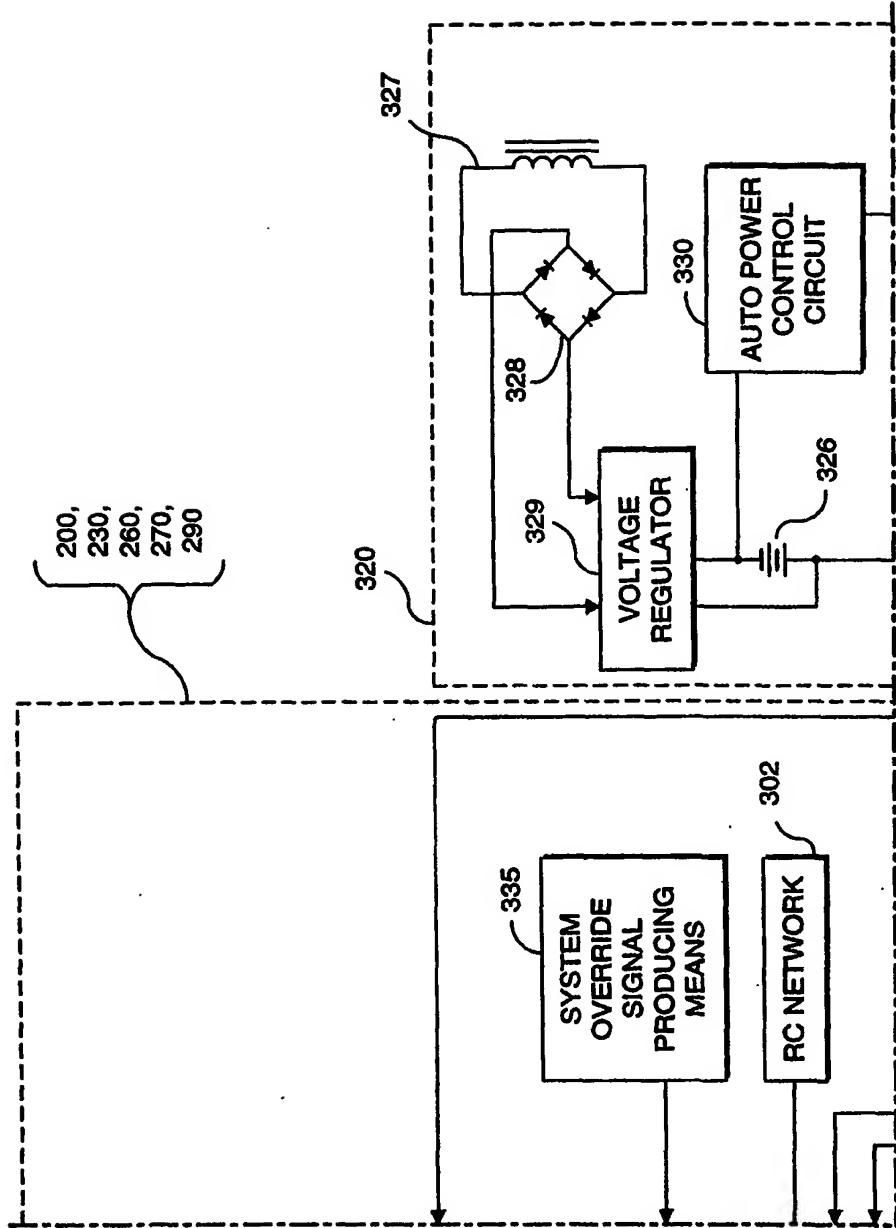


FIG. 29A3

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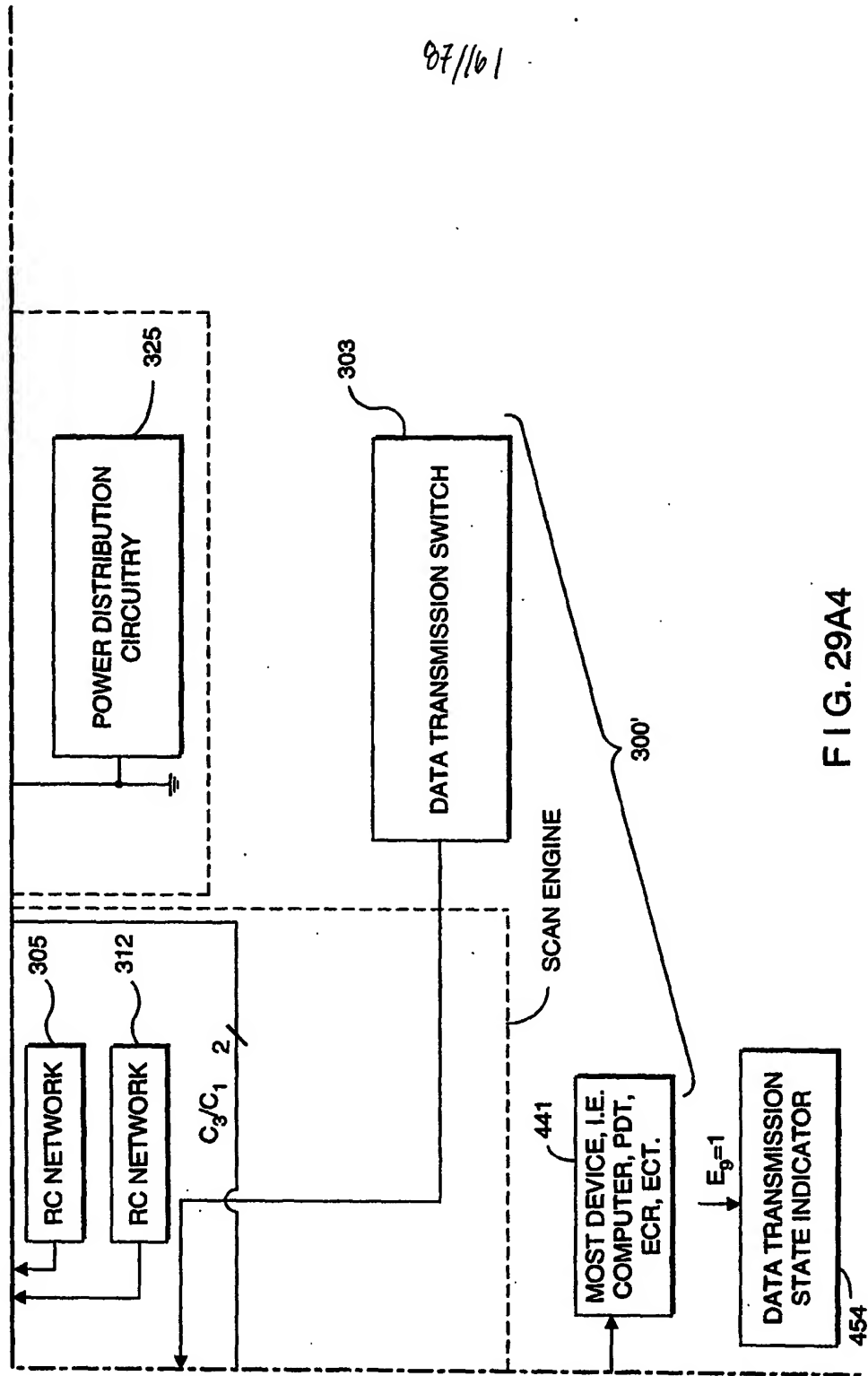


FIG. 29A4

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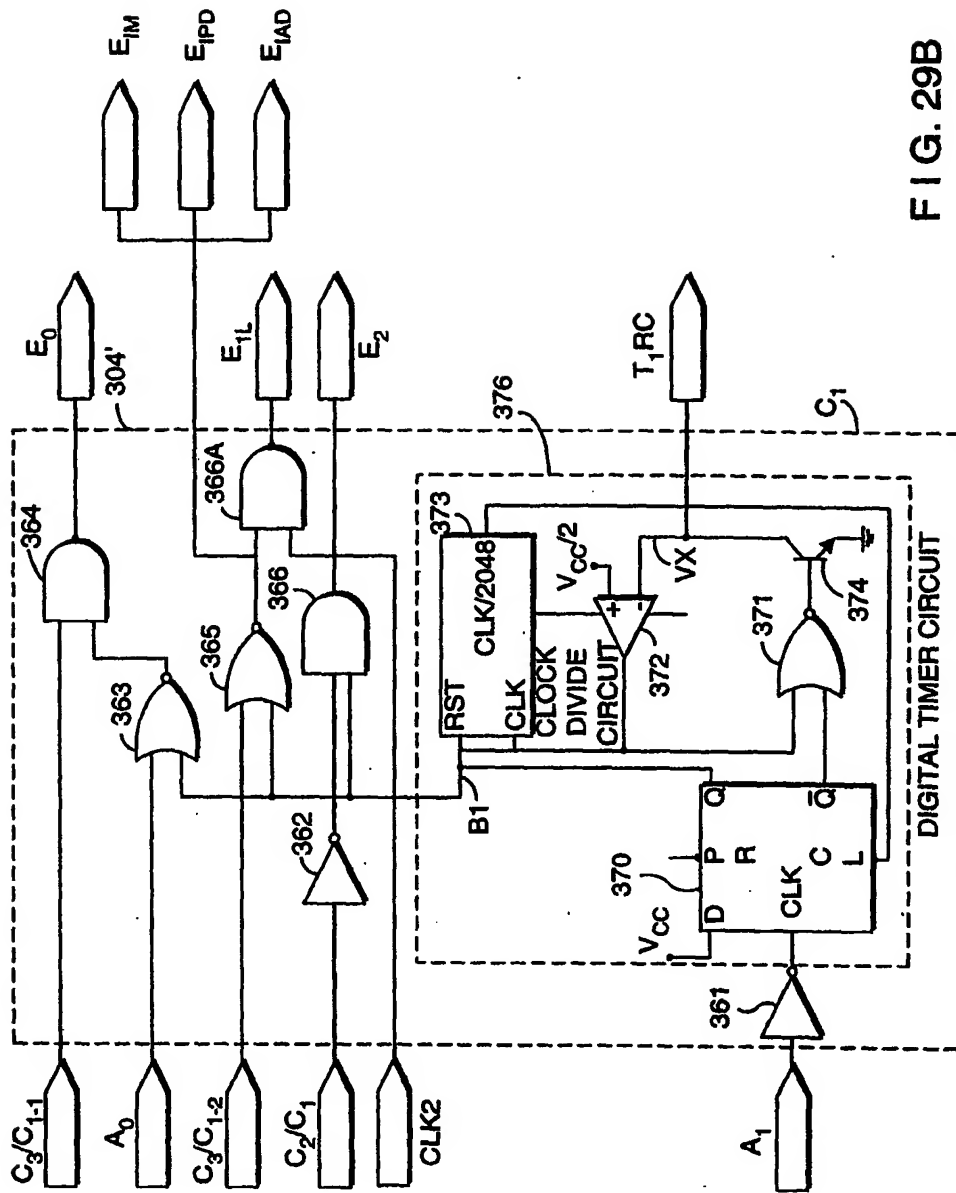


FIG. 29B

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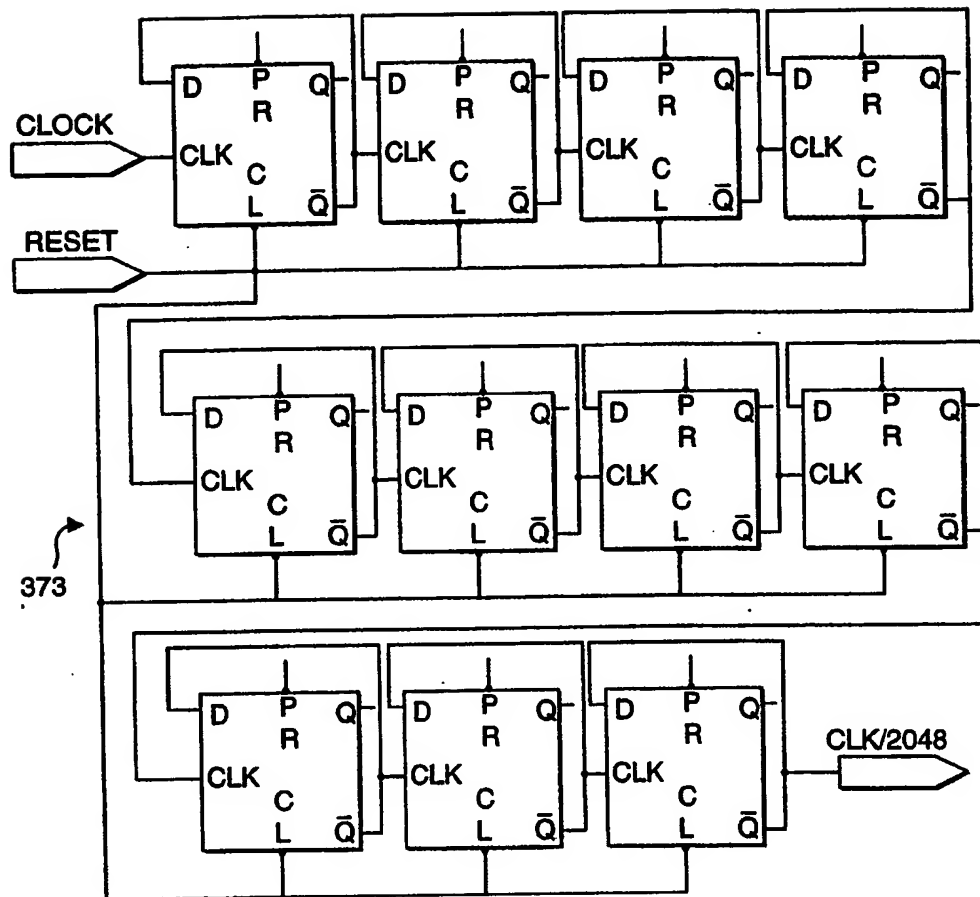


FIG. 29C

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$$\left\{ \begin{array}{l} E_0 = \overline{(B1 + A_0) (C_3 / C_{1-1})} \\ E_{IM} = E_{IPD} = E_{IAD} = \overline{(C_3 / C_{1-2}) + B1} \\ E_L = \overline{[(C_3 / C_{1-1}) + B1] [B2]} \\ E_2 = \overline{(C_2 / C_1) (B1)} \end{array} \right.$$

FIG. 29D

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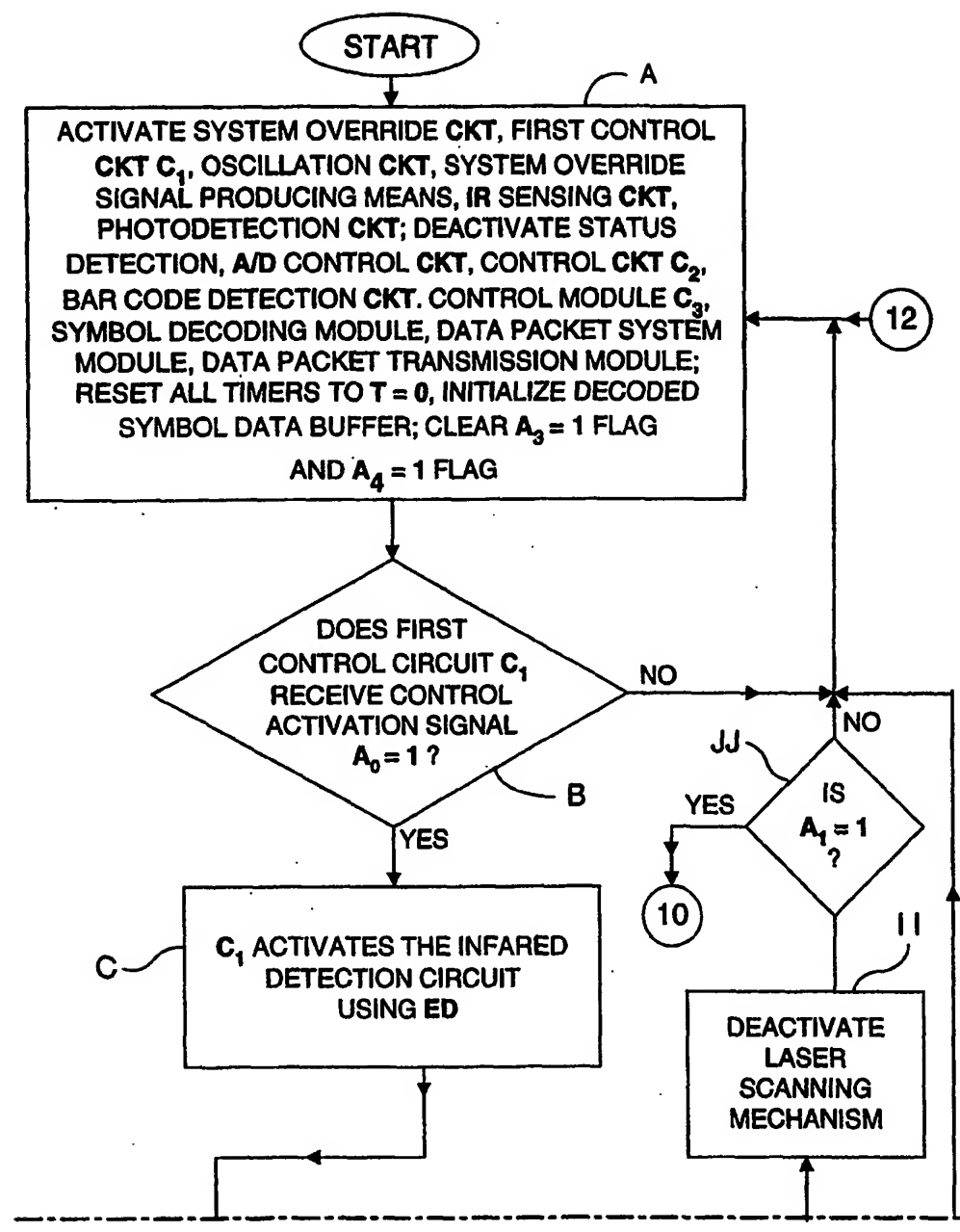


FIG. 30A1

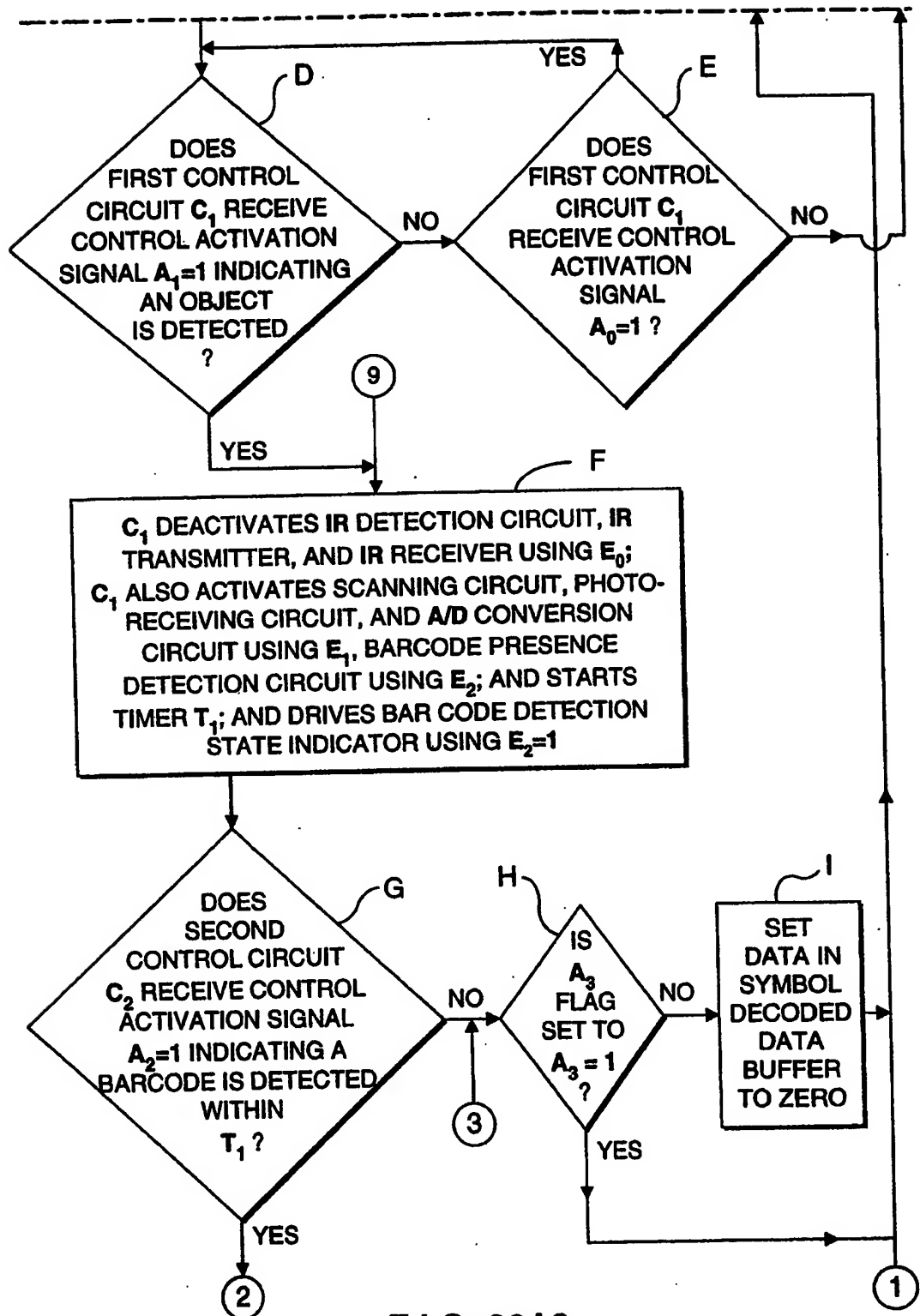
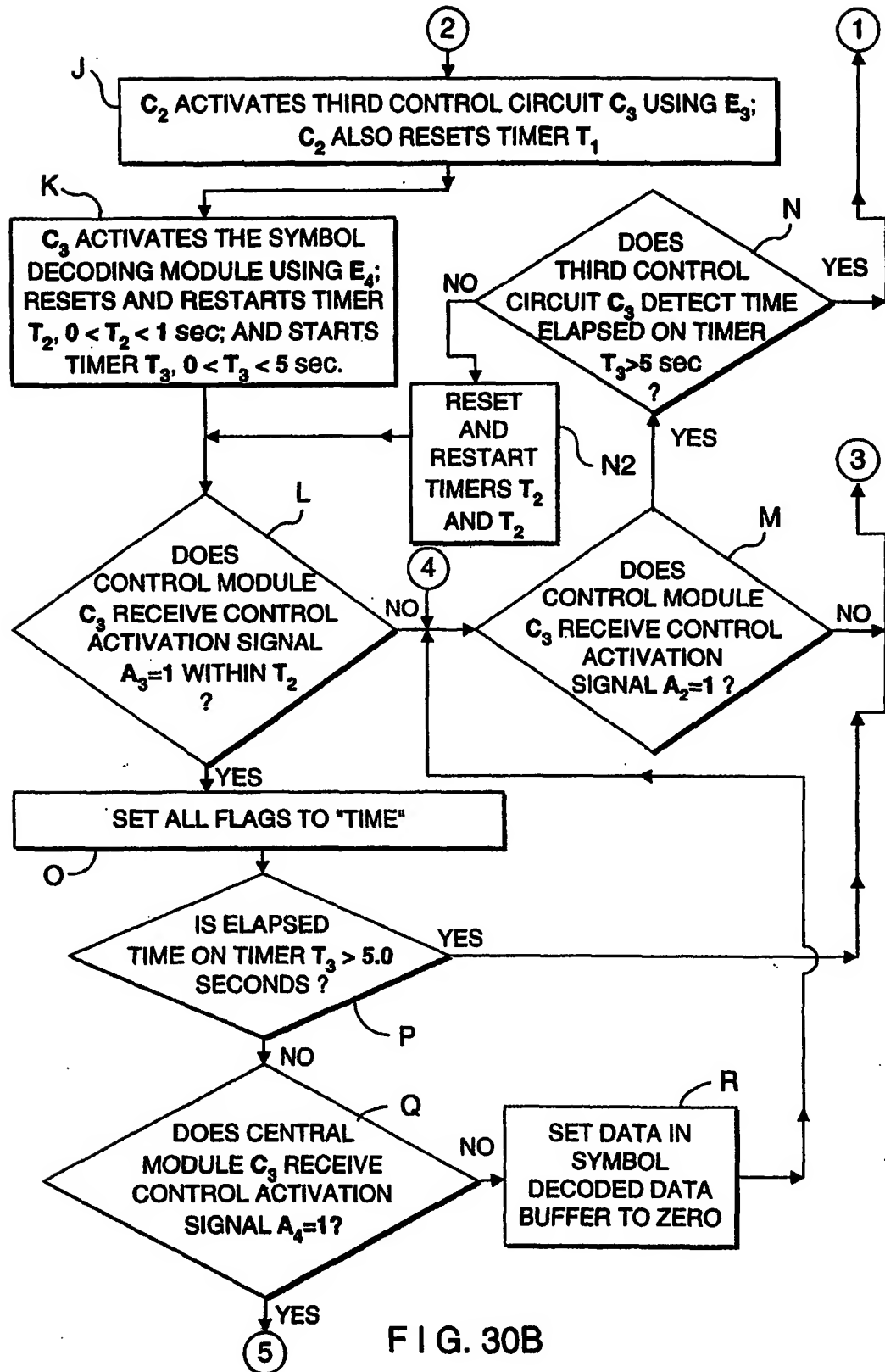


FIG. 30A2



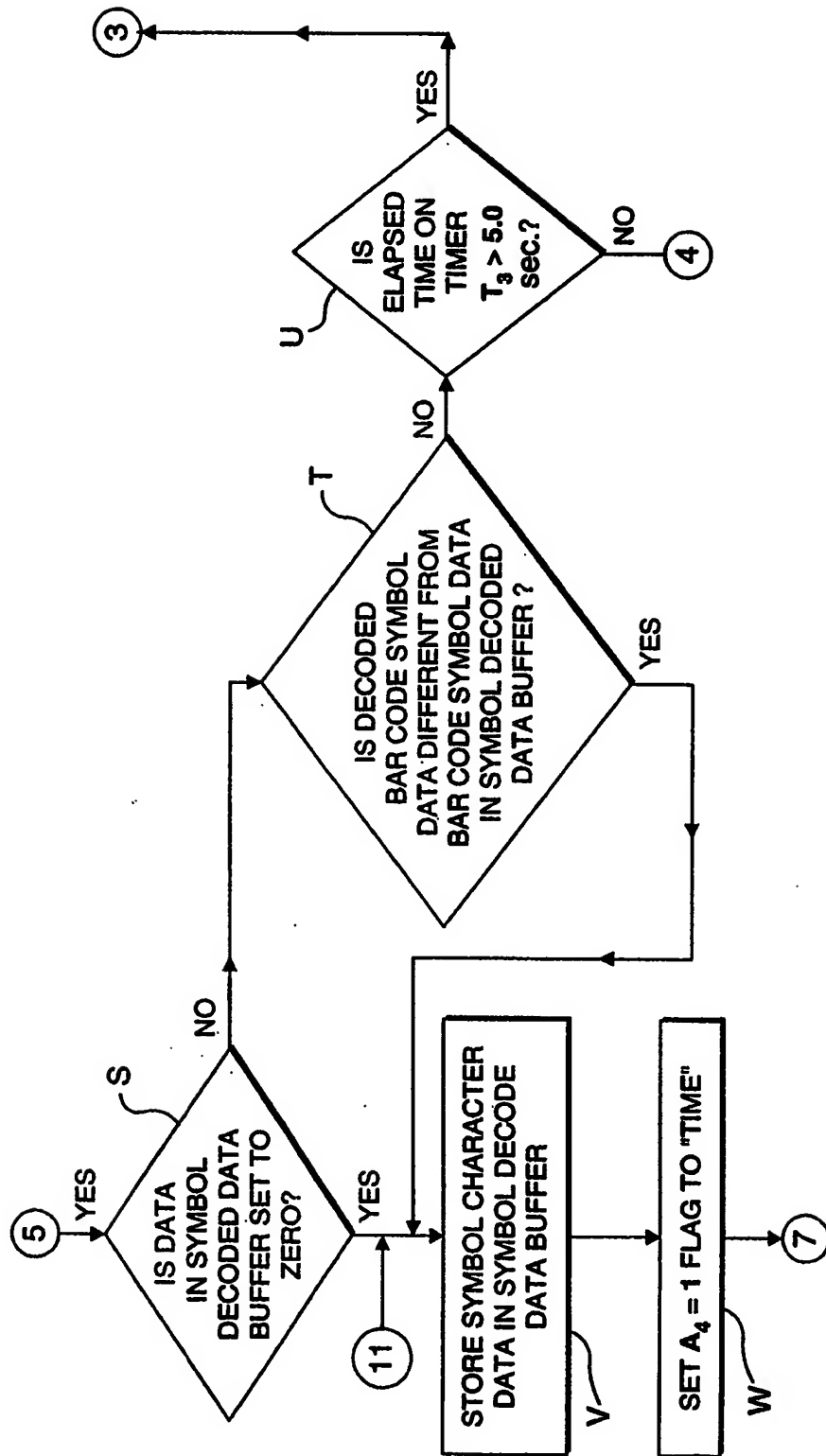


FIG. 30C

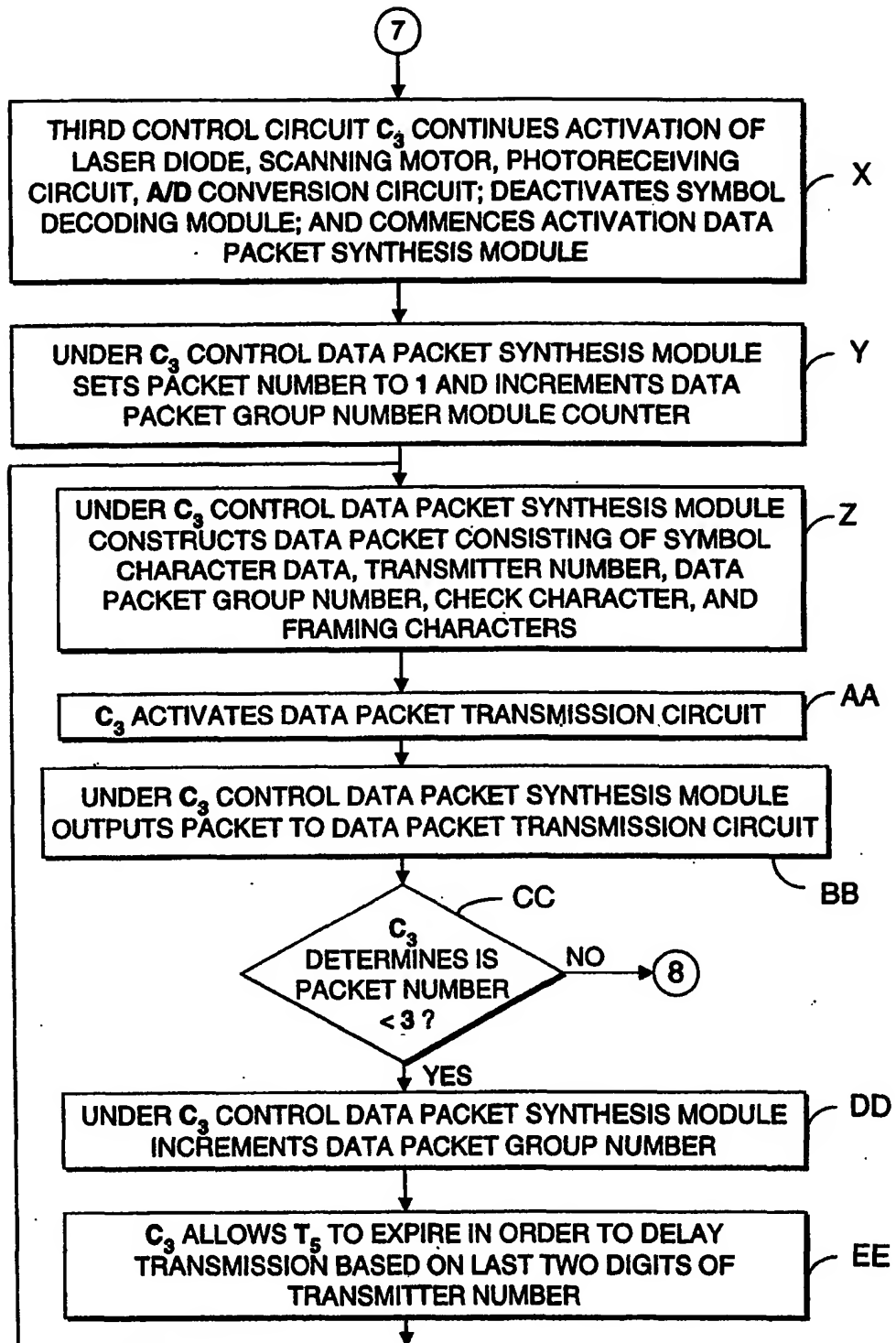


FIG. 30D

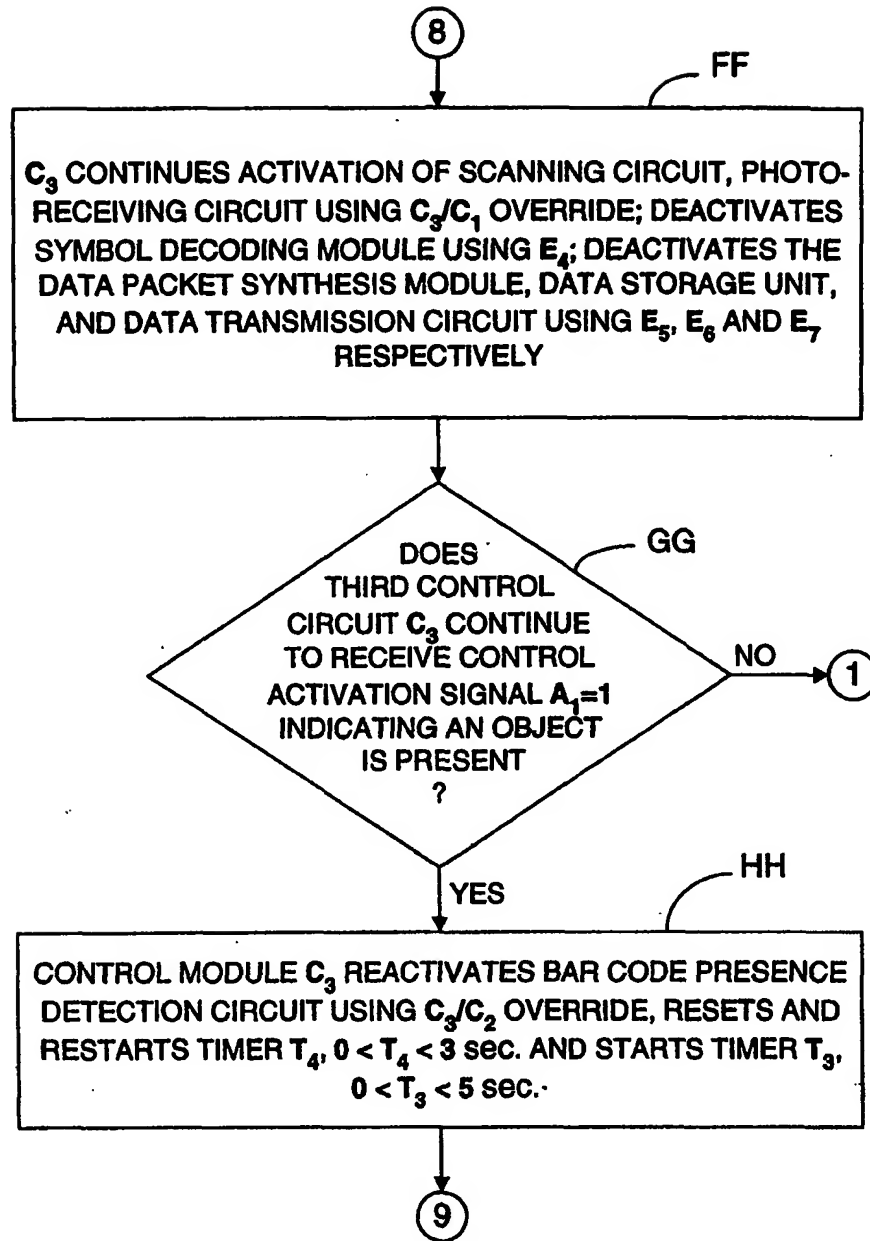


FIG. 30E

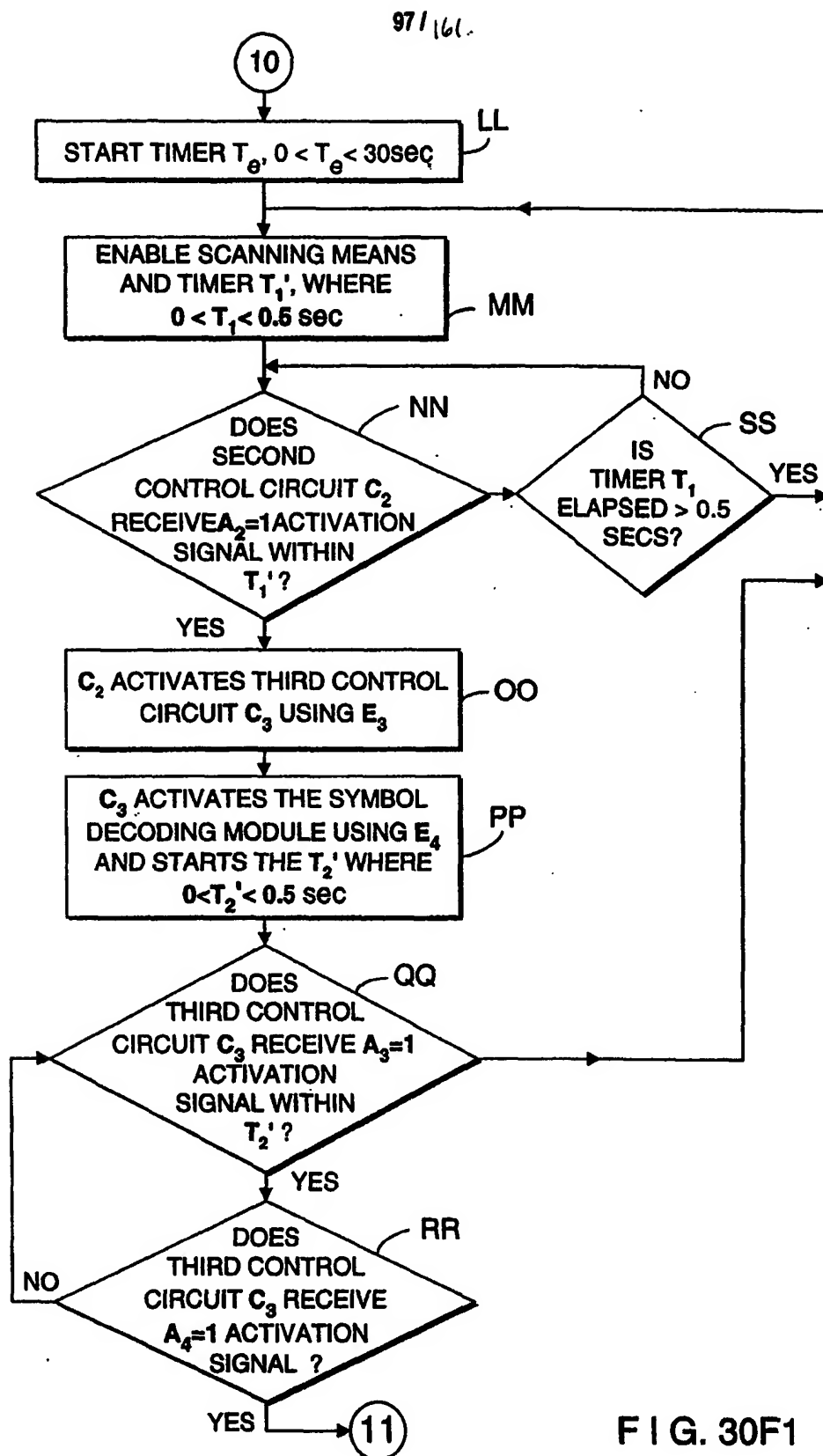
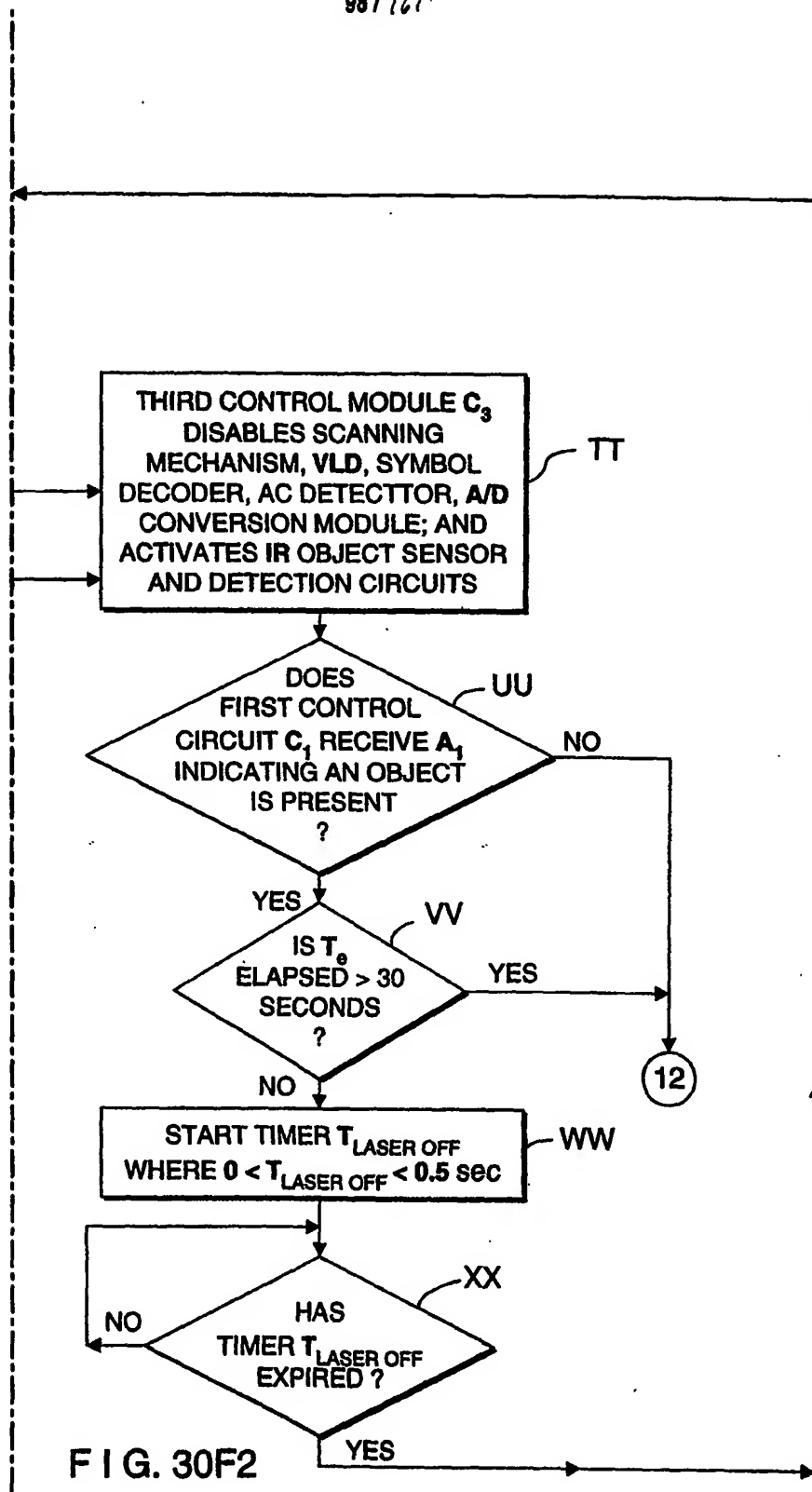


FIG. 30F1



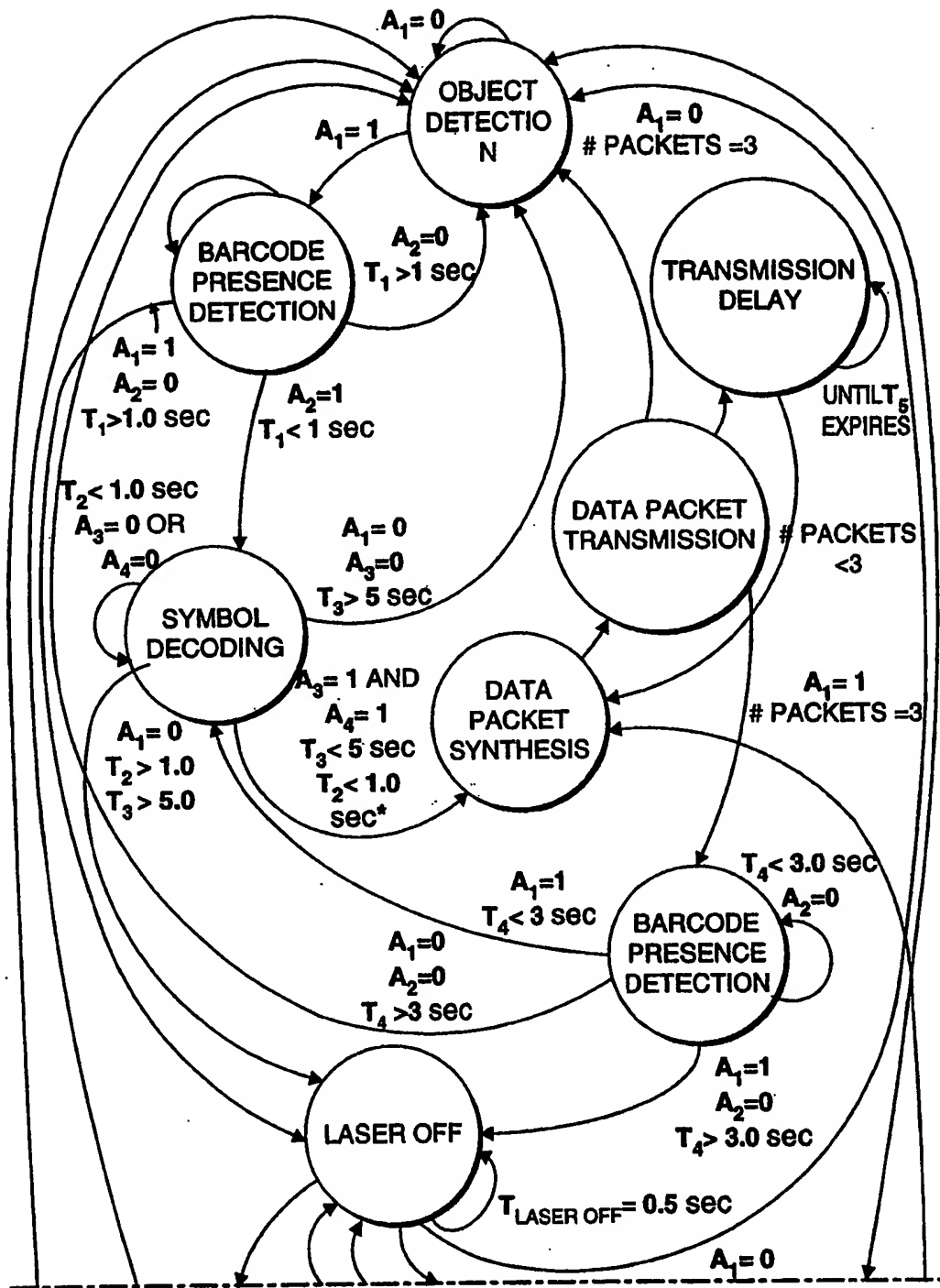
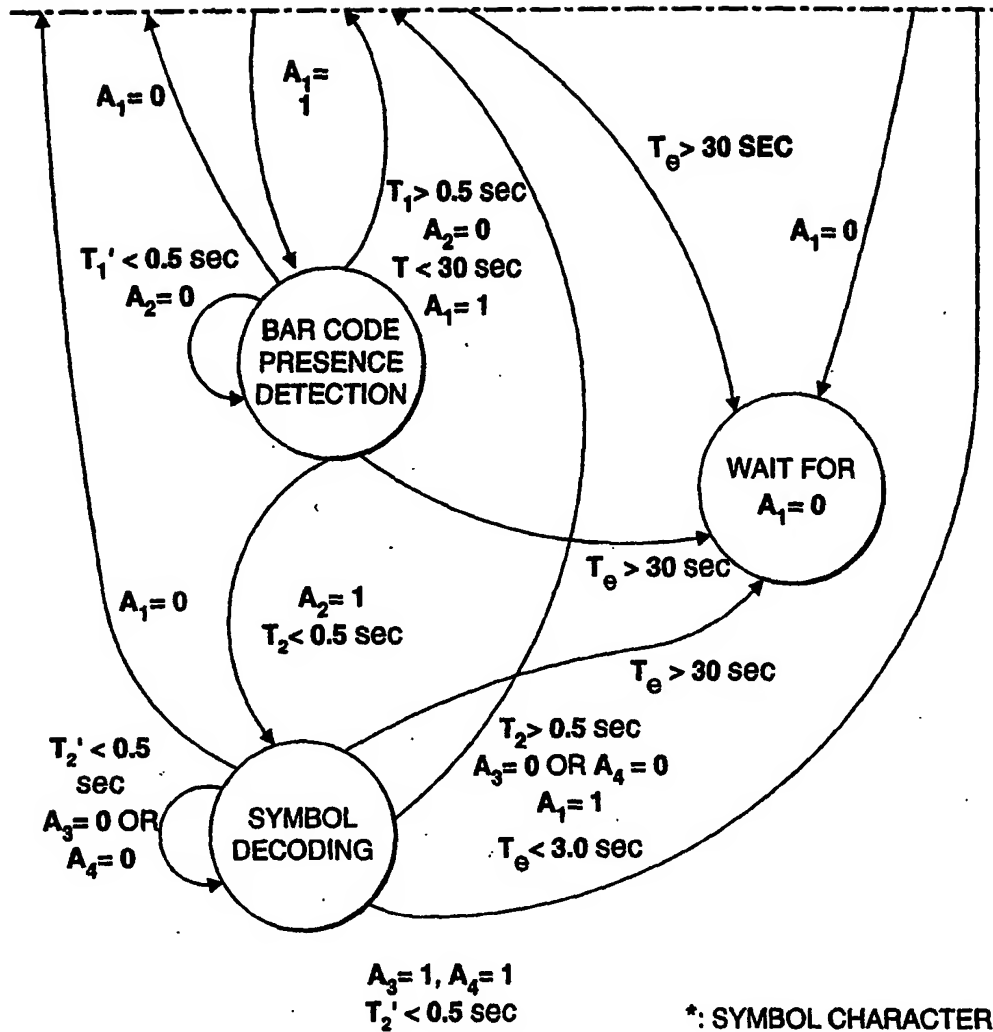


FIG. 31A



*: SYMBOL CHARACTER
DATA IS DIFFERENT
THAN DATA ELEMENT IN
DECODED SYMBOL
DATA BUFFER

FIG. 31B

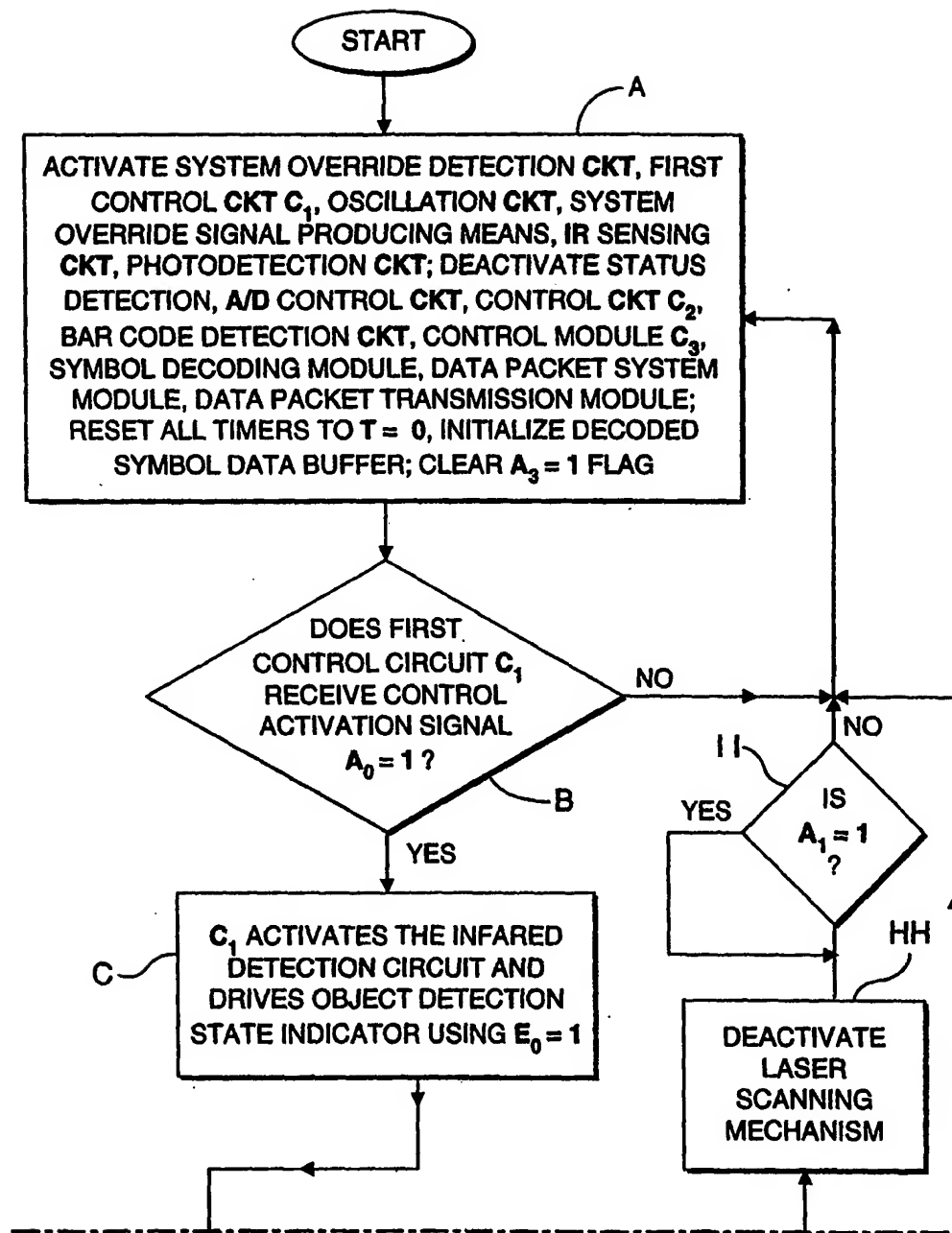


FIG. 32A1

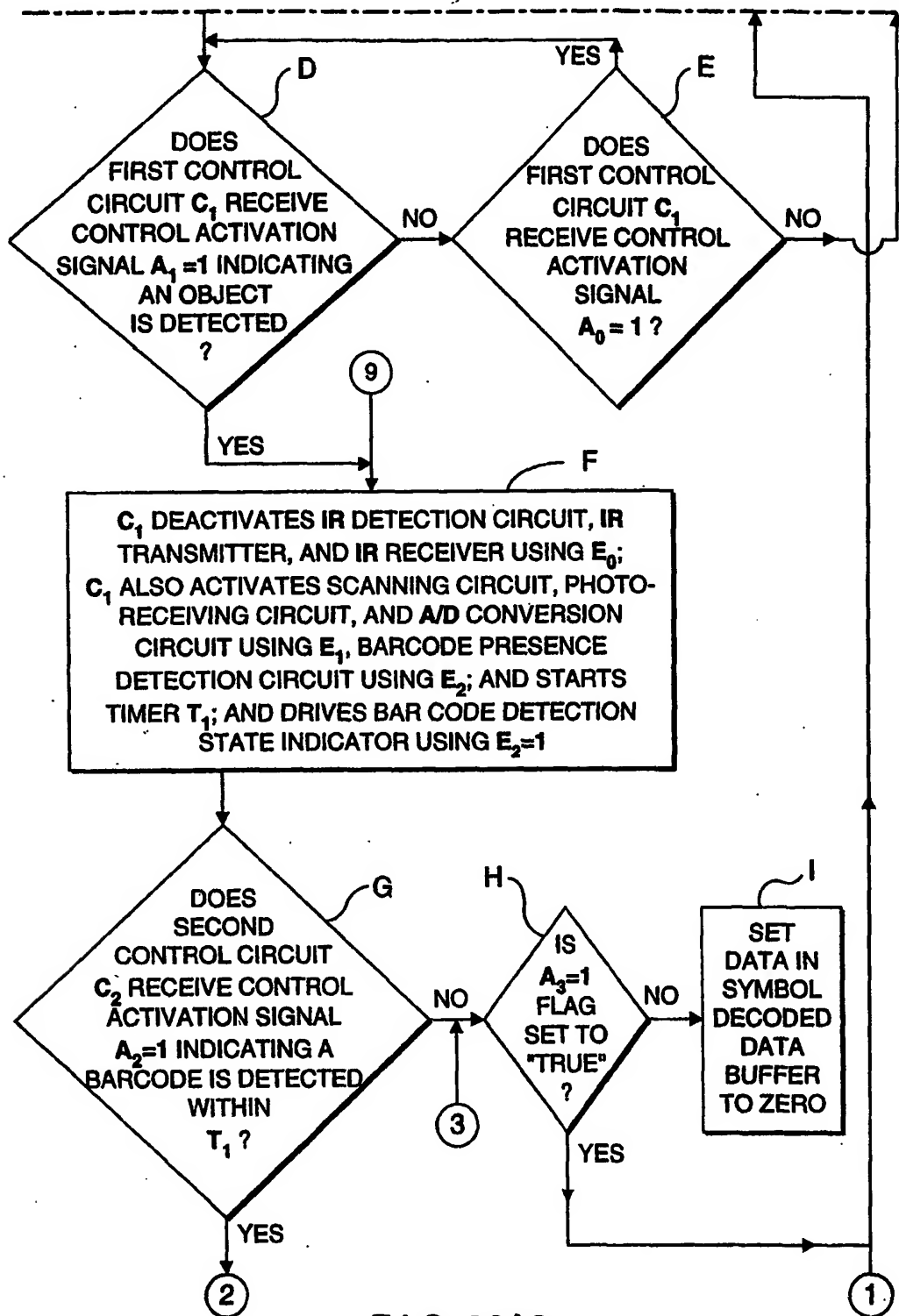
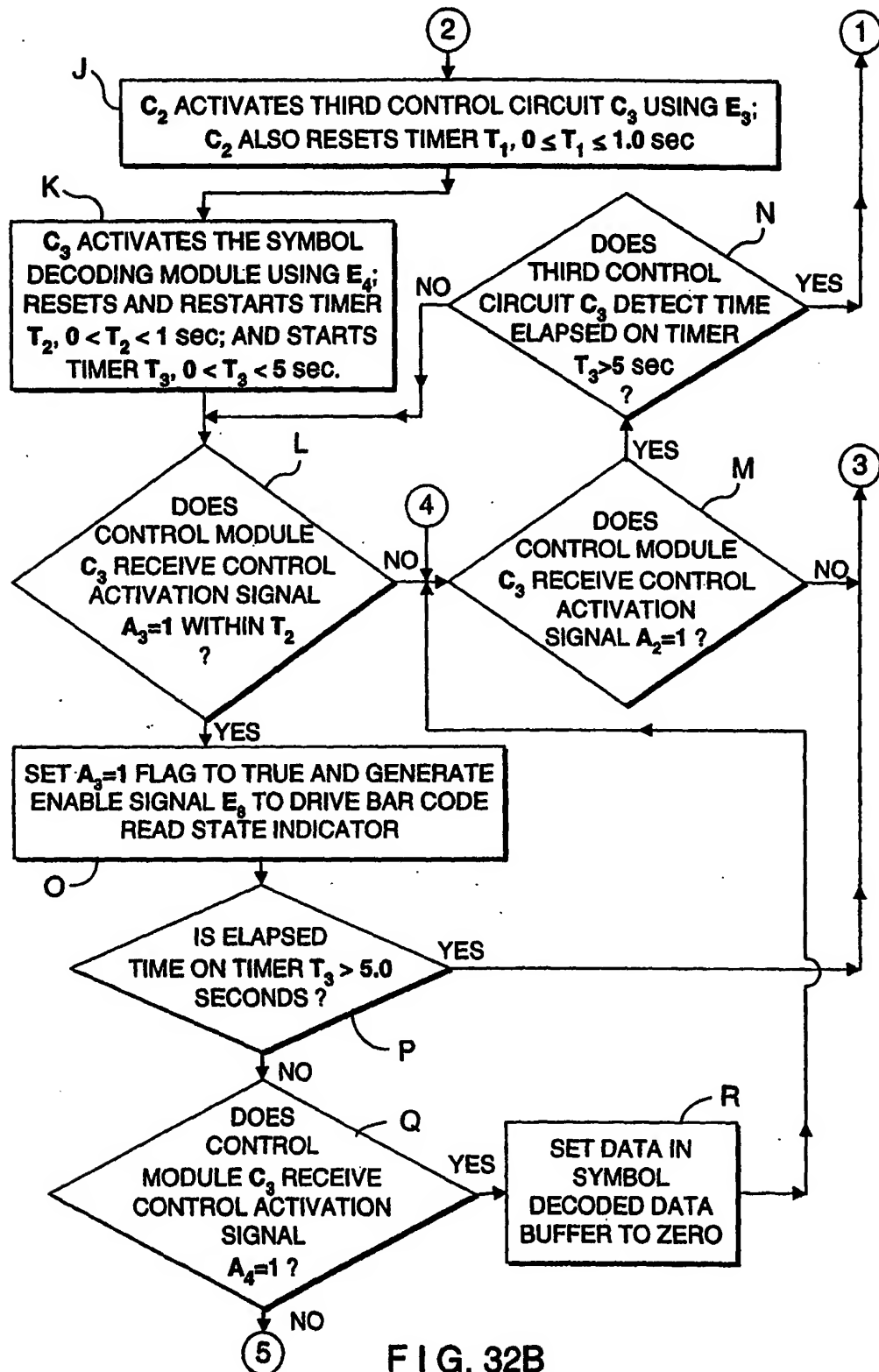
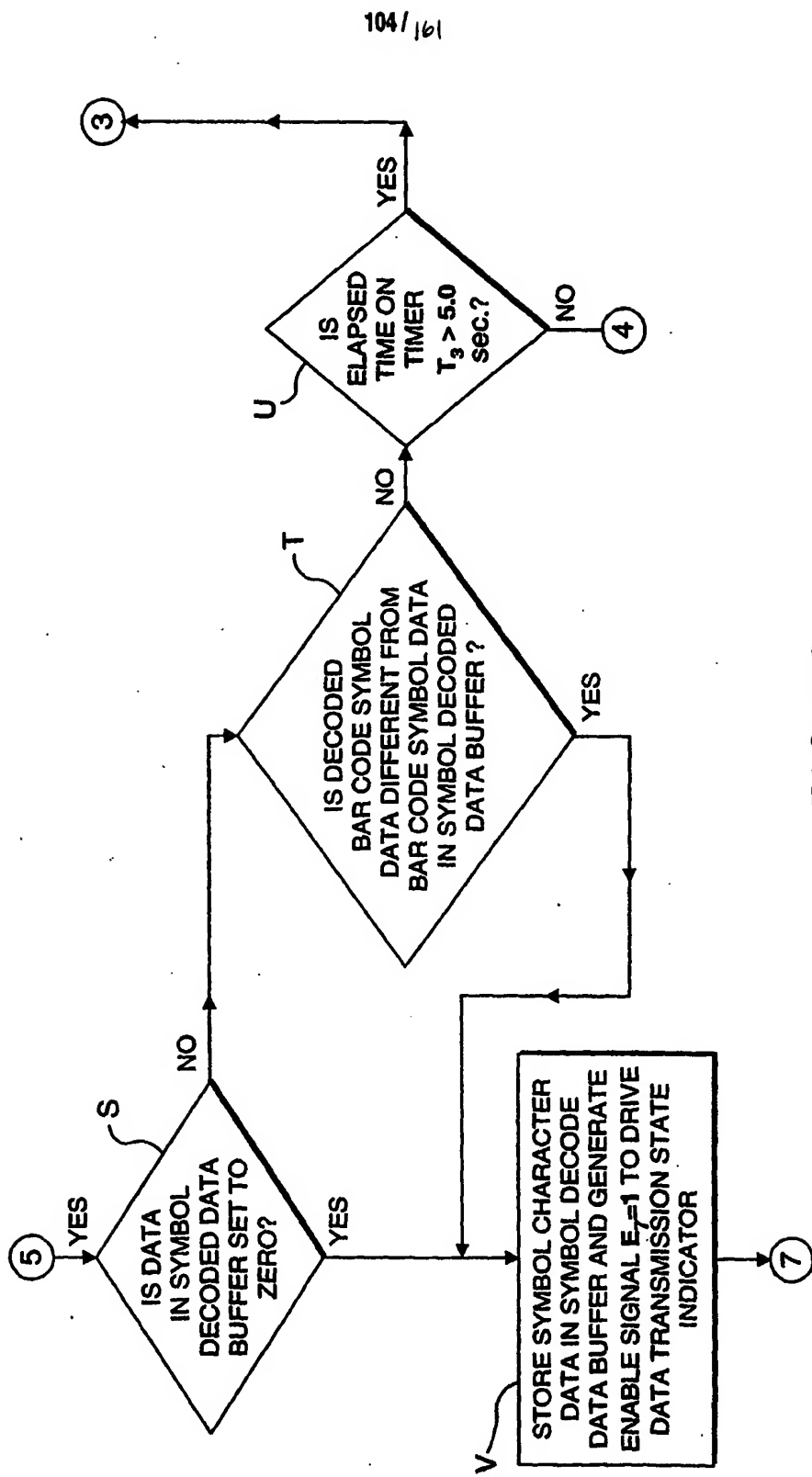


FIG. 32A2





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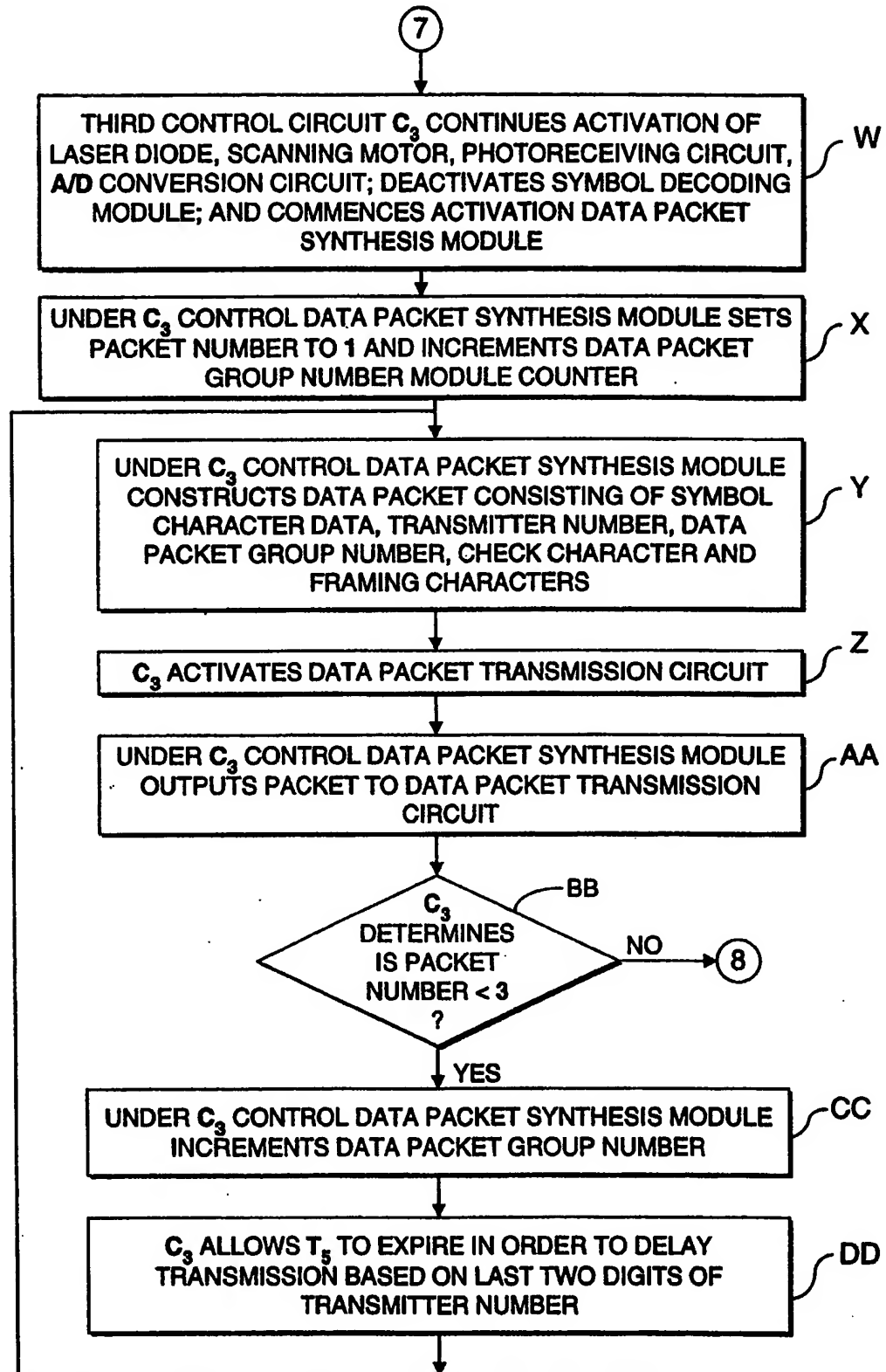


FIG. 32D

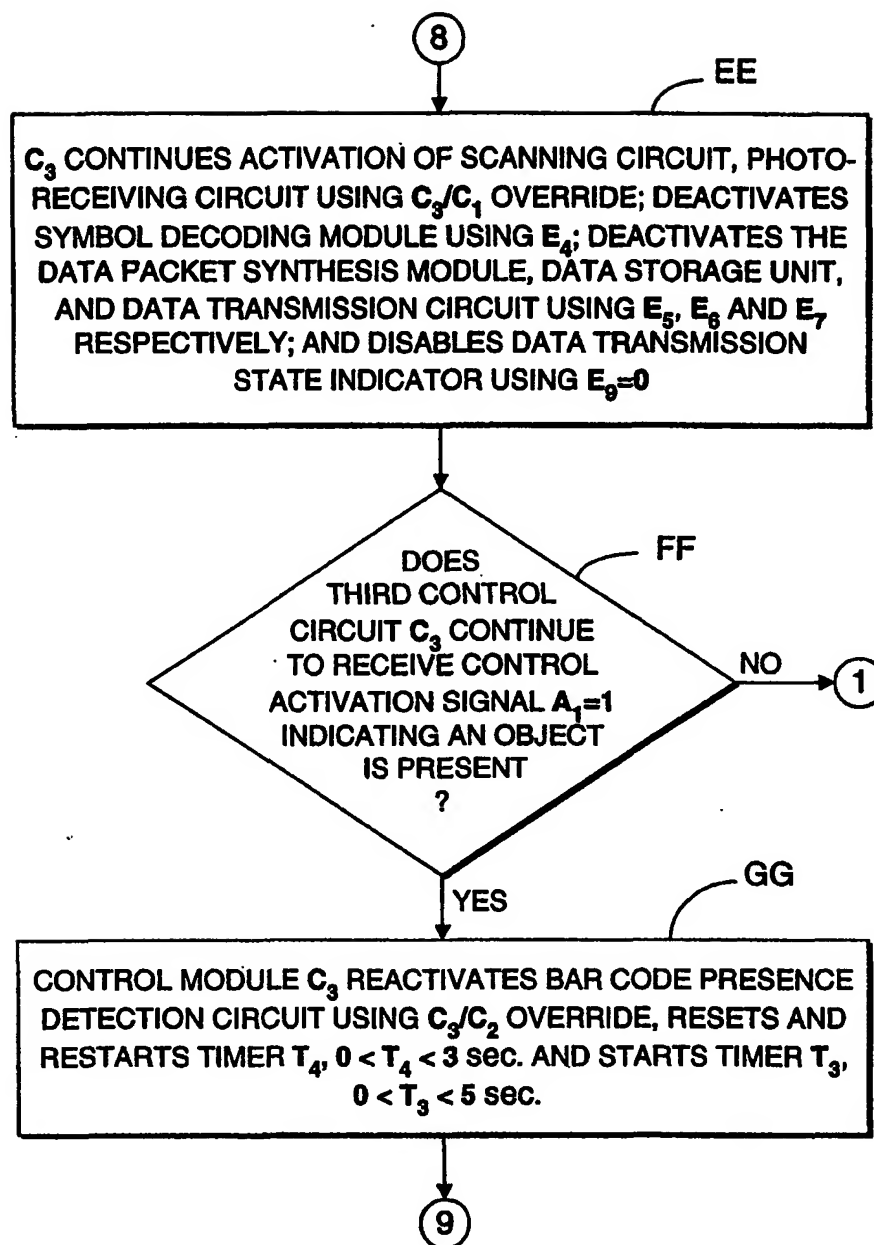


FIG. 32E

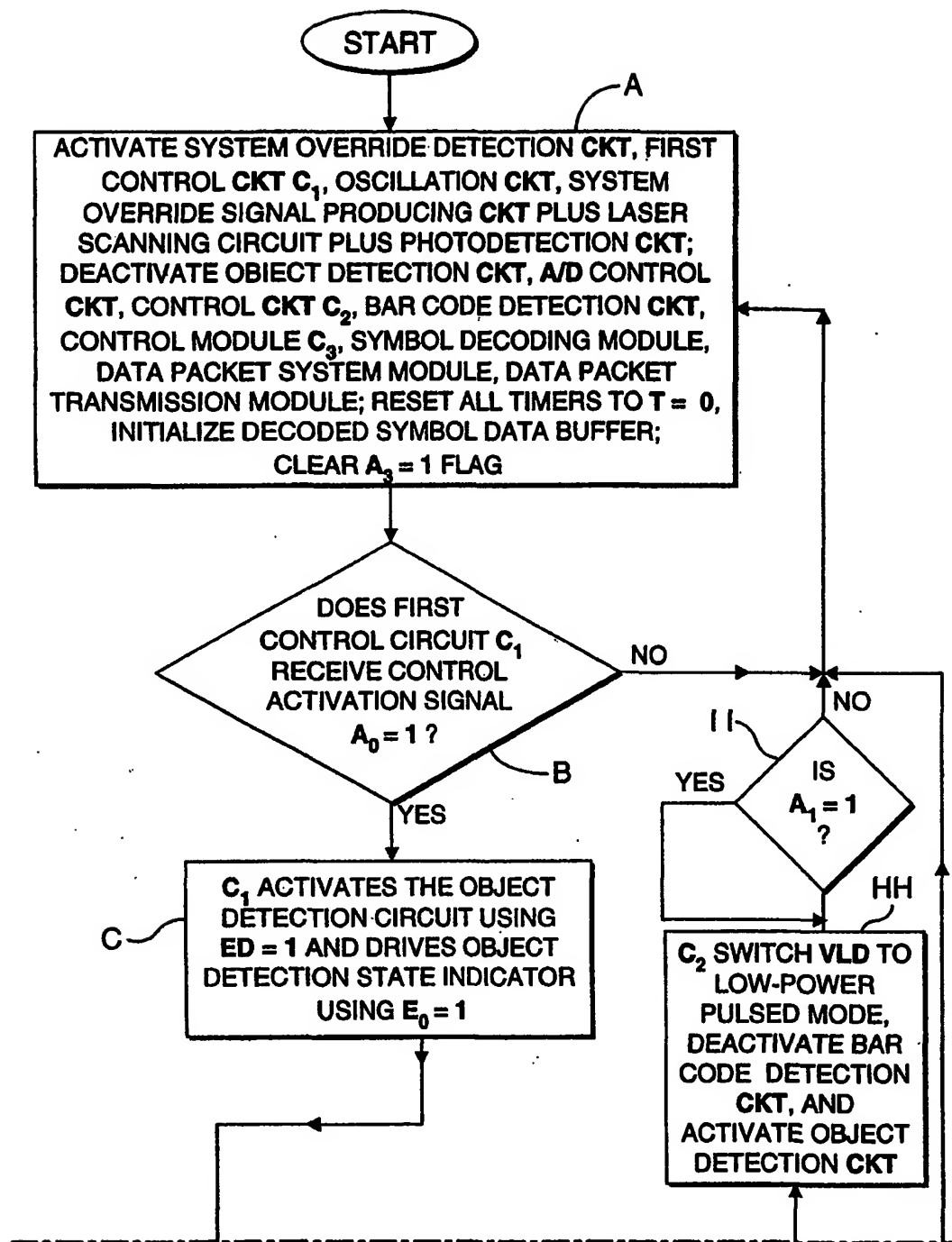
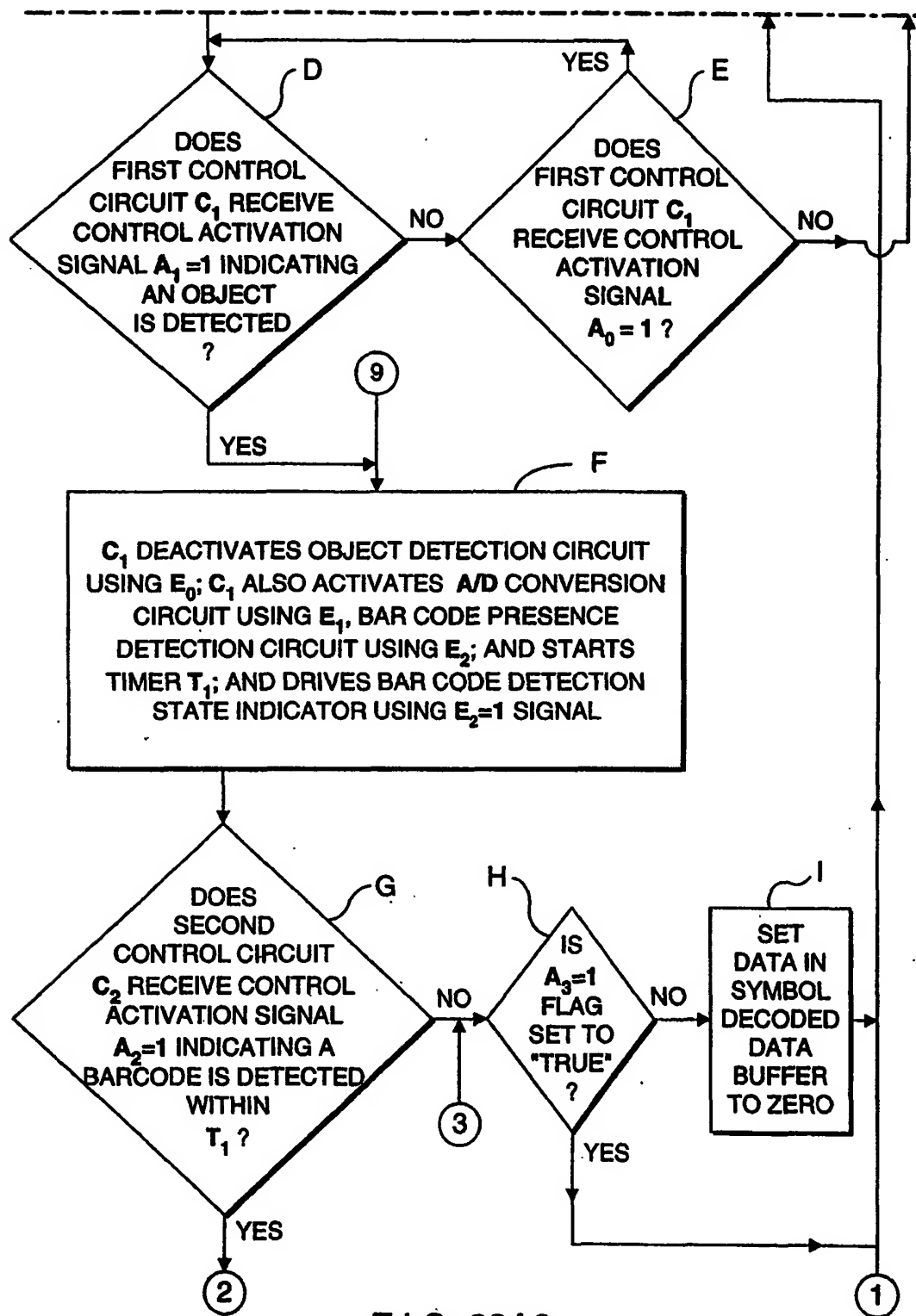
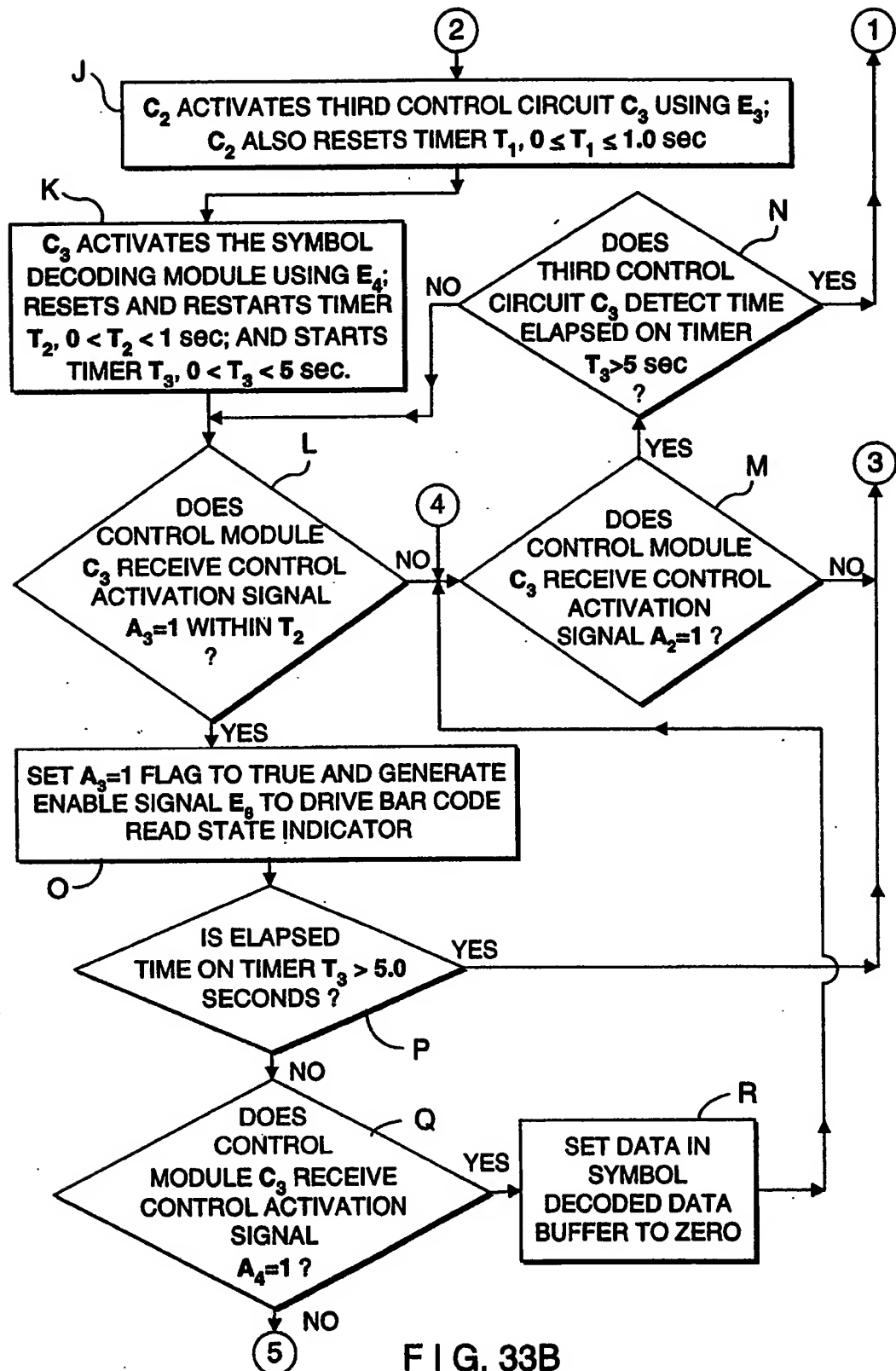


FIG. 33A1





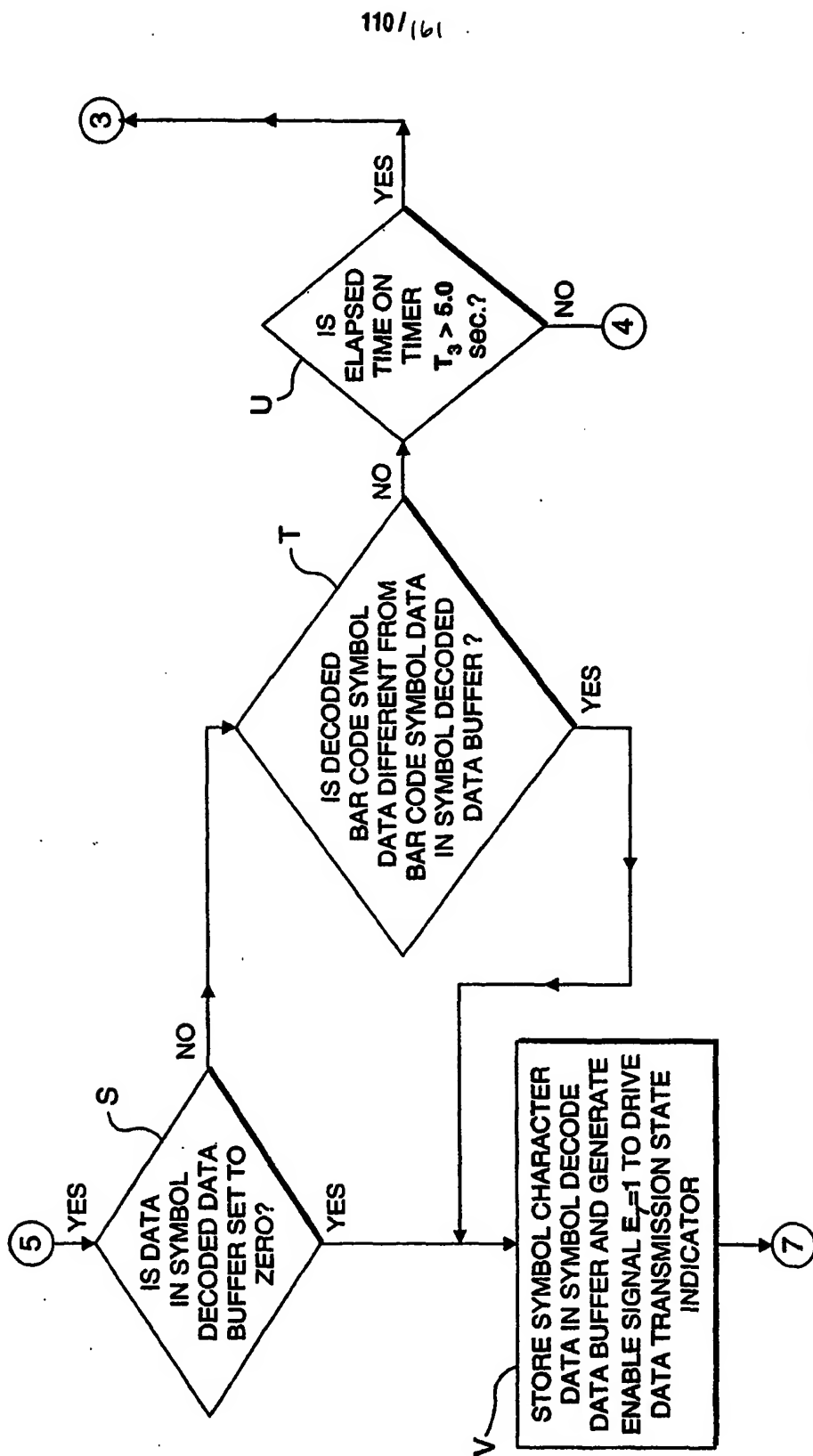


FIG. 33C

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7

THIRD CONTROL CIRCUIT C_3 CONTINUES ACTIVATION OF LASER DIODE, SCANNING MOTOR, PHOTORECEIVING CIRCUIT, A/D CONVERSION CIRCUIT; DEACTIVATES SYMBOL DECODING MODULE; AND COMMENCES ACTIVATION DATA PACKET SYNTHESIS MODULE

W

UNDER C_3 CONTROL DATA PACKET SYNTHESIS MODULE SETS PACKET NUMBER TO 1 AND INCREMENTS DATA PACKET GROUP NUMBER MODULE COUNTER

X

UNDER C_3 CONTROL DATA PACKET SYNTHESIS MODULE CONSTRUCTS DATA PACKET CONSISTING OF SYMBOL CHARACTER DATA, TRANSMITTER NUMBER, DATA PACKET GROUP NUMBER, CHECK CHARACTER AND FRAMING CHARACTERS

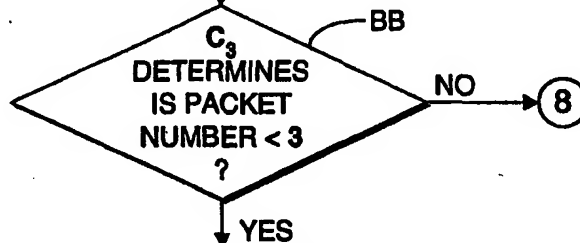
Y

C_3 ACTIVATES DATA PACKET TRANSMISSION CIRCUIT

Z

UNDER C_3 CONTROL DATA PACKET SYNTHESIS MODULE OUTPUTS PACKET TO DATA PACKET TRANSMISSION CIRCUIT

AA



8

UNDER C_3 CONTROL DATA PACKET SYNTHESIS MODULE INCREMENTS DATA PACKET GROUP NUMBER

CC

C_3 ALLOWS T_5 TO EXPIRE IN ORDER TO DELAY TRANSMISSION BASED ON LAST TWO DIGITS OF TRANSMITTER NUMBER

DD

FIG. 33D

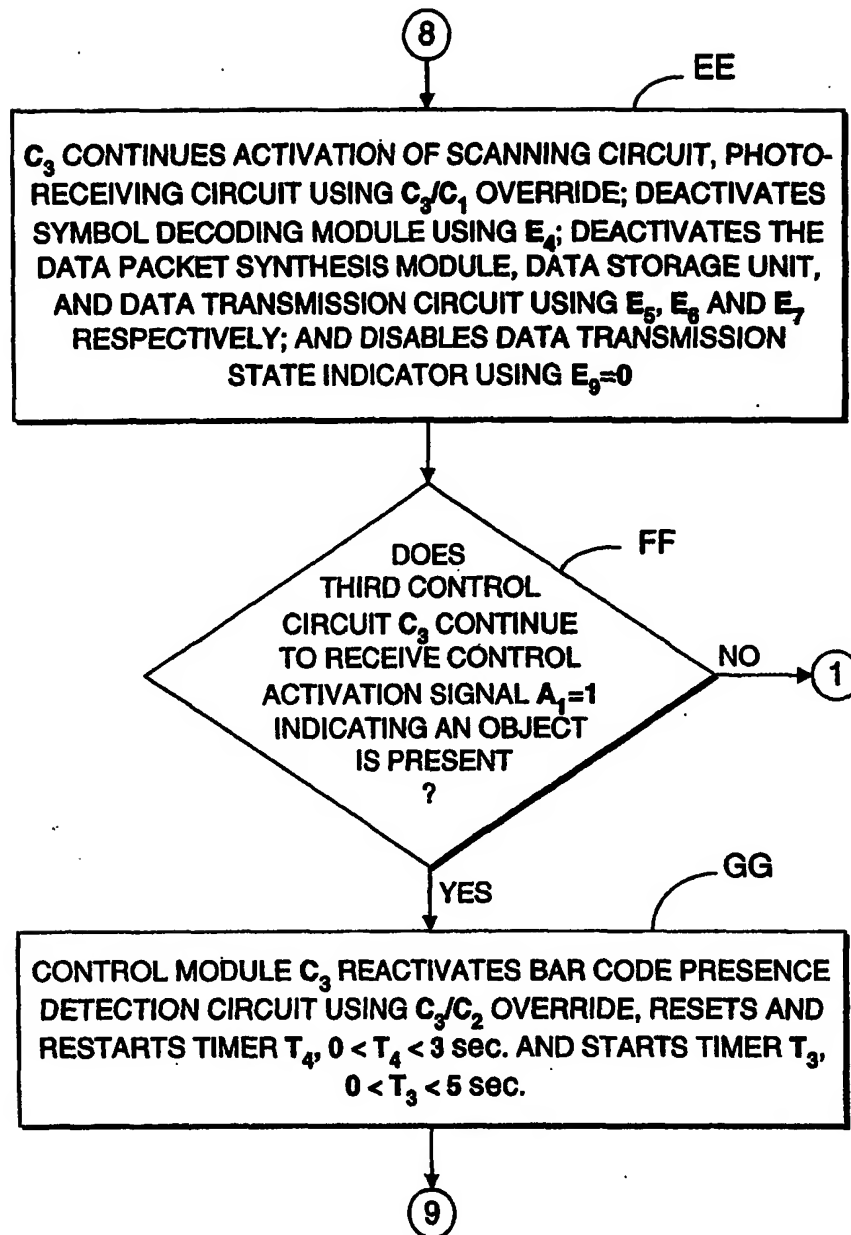
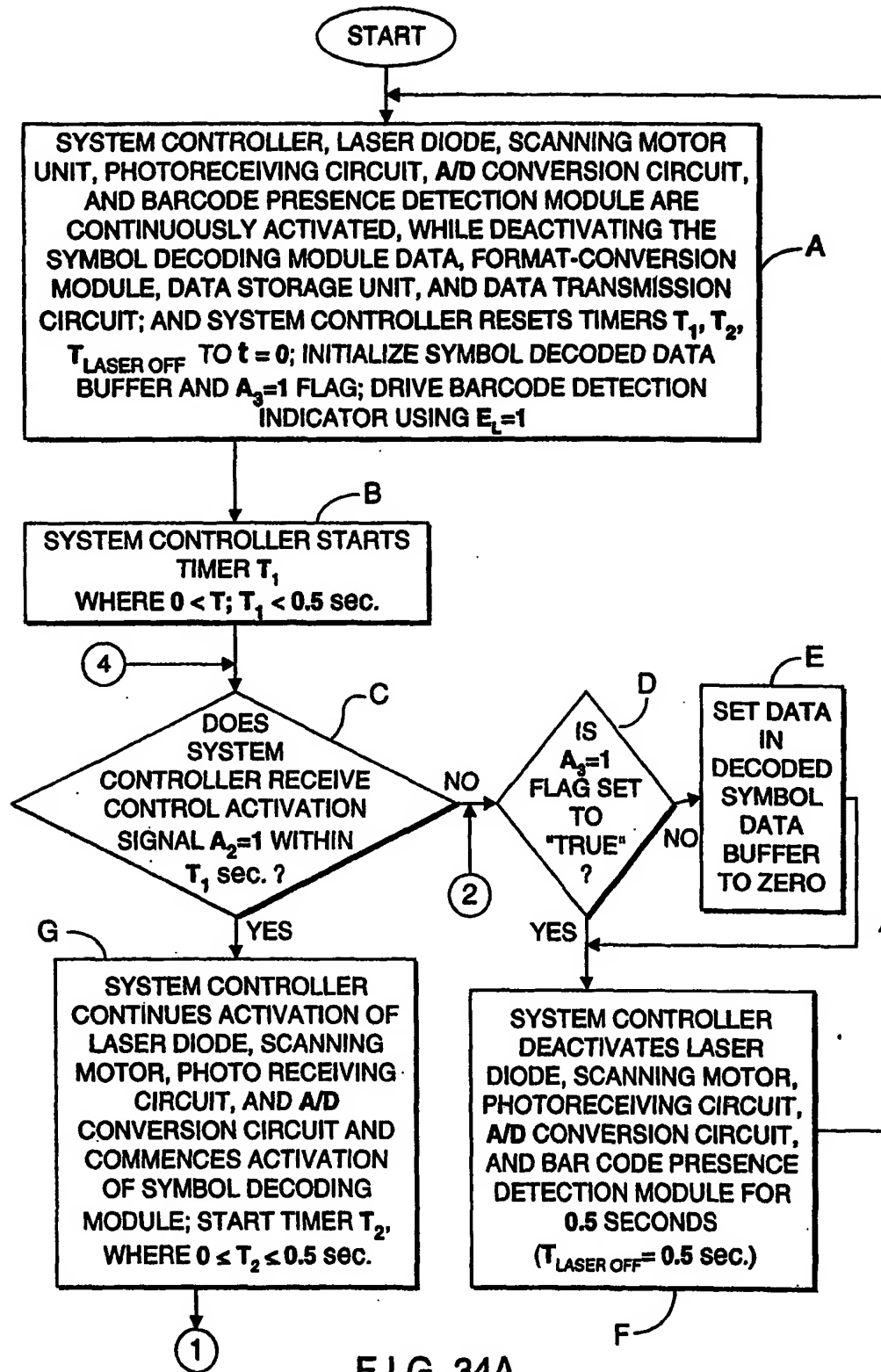


FIG. 33E



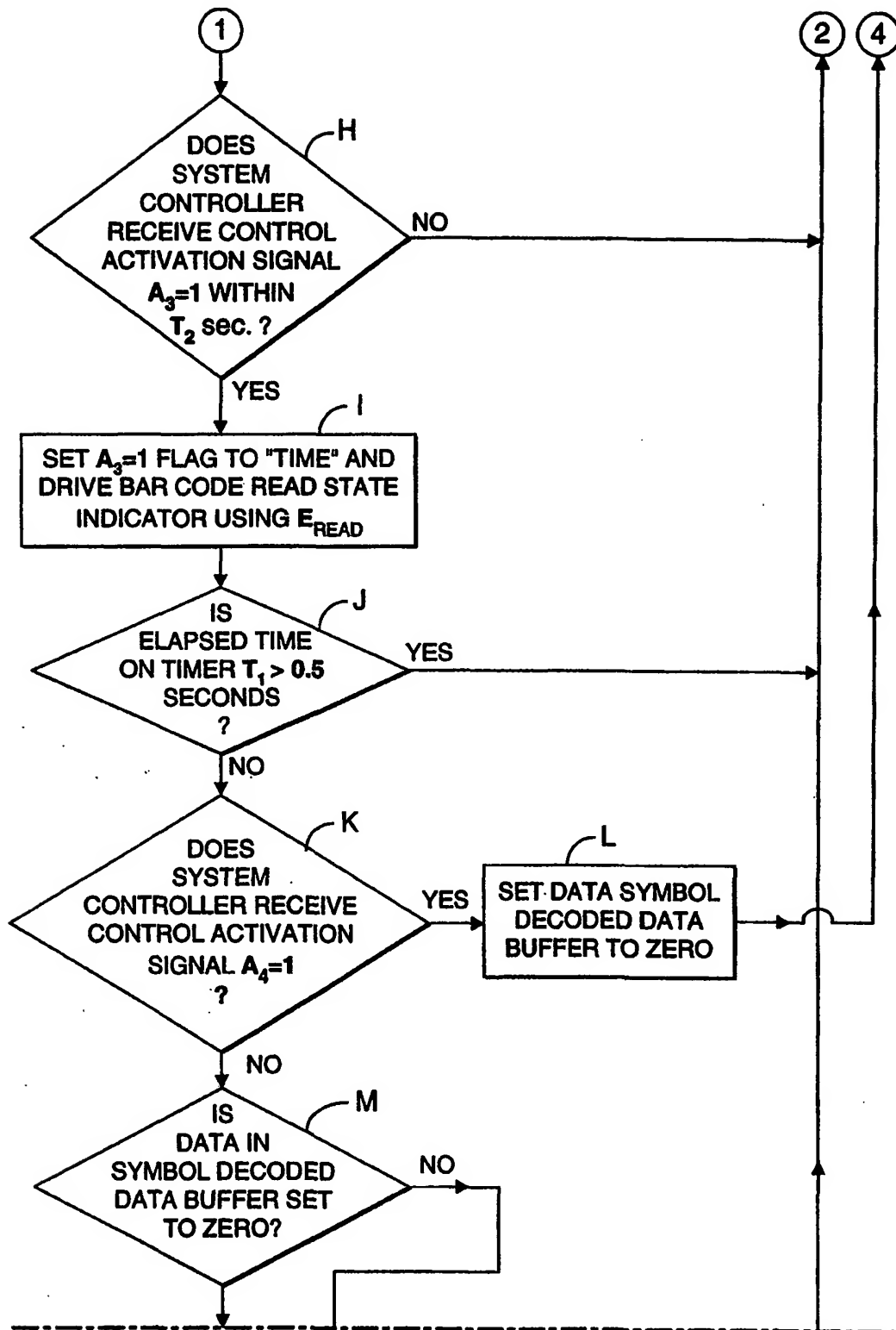


FIG. 34B1

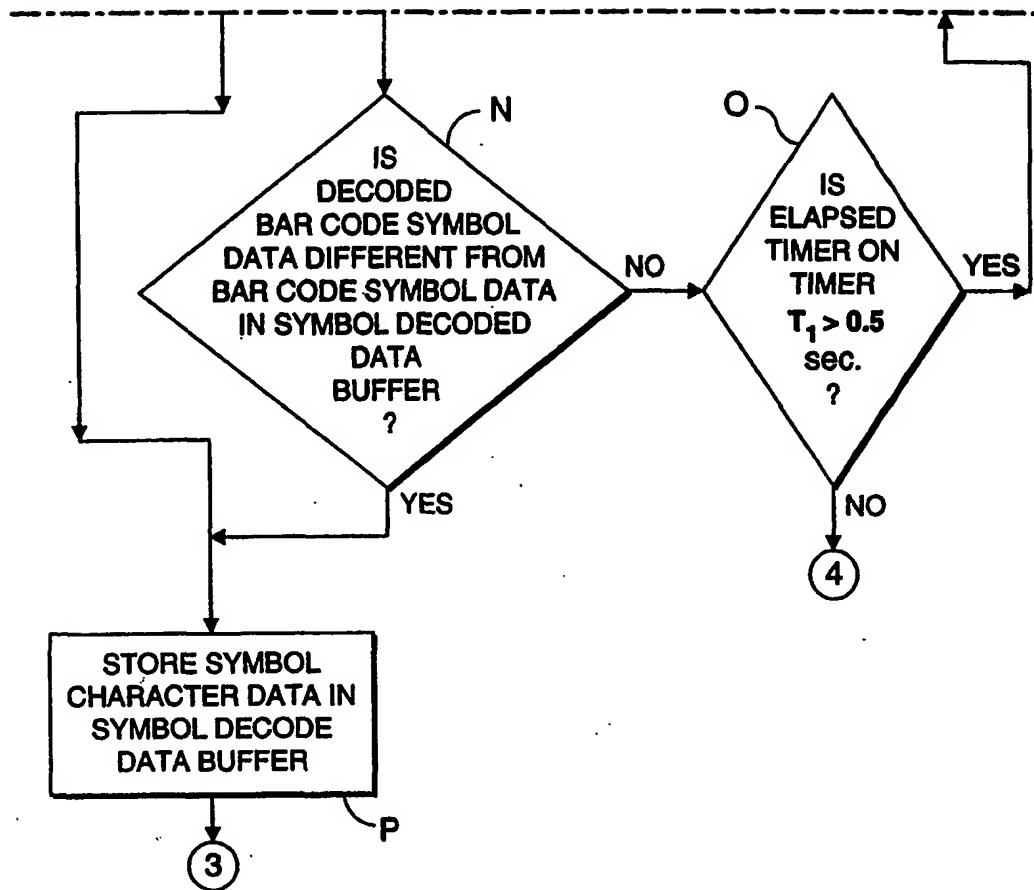


FIG. 34B2

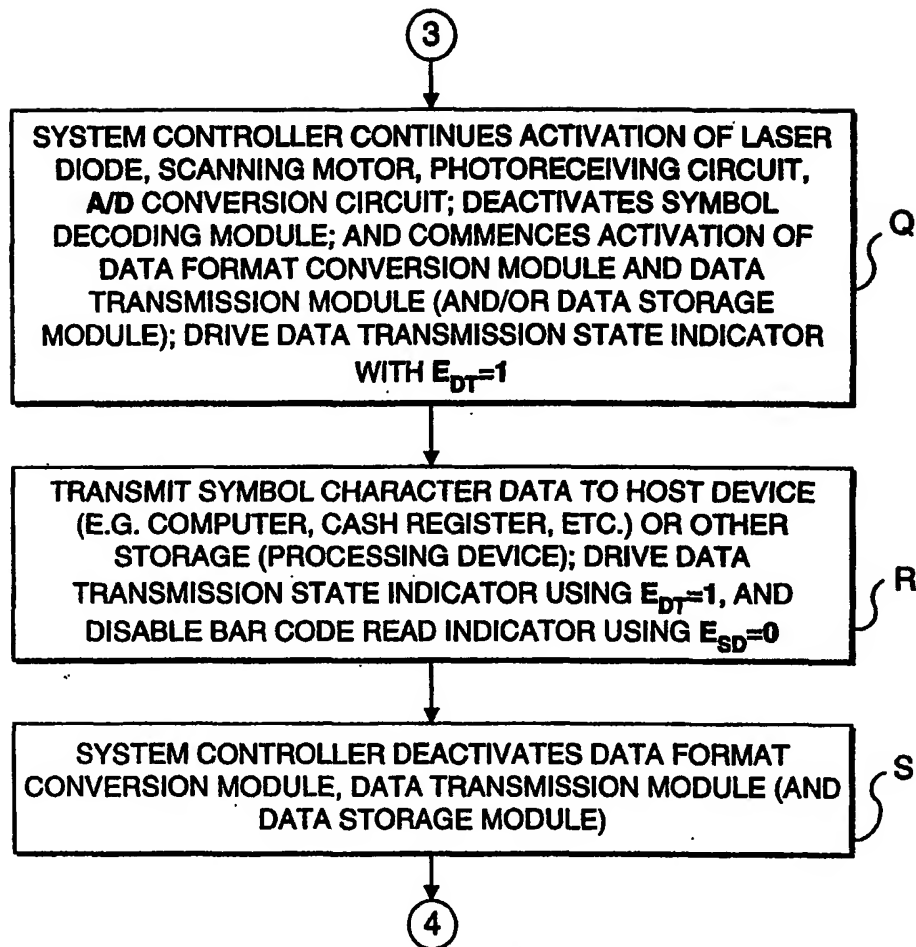


FIG. 34C

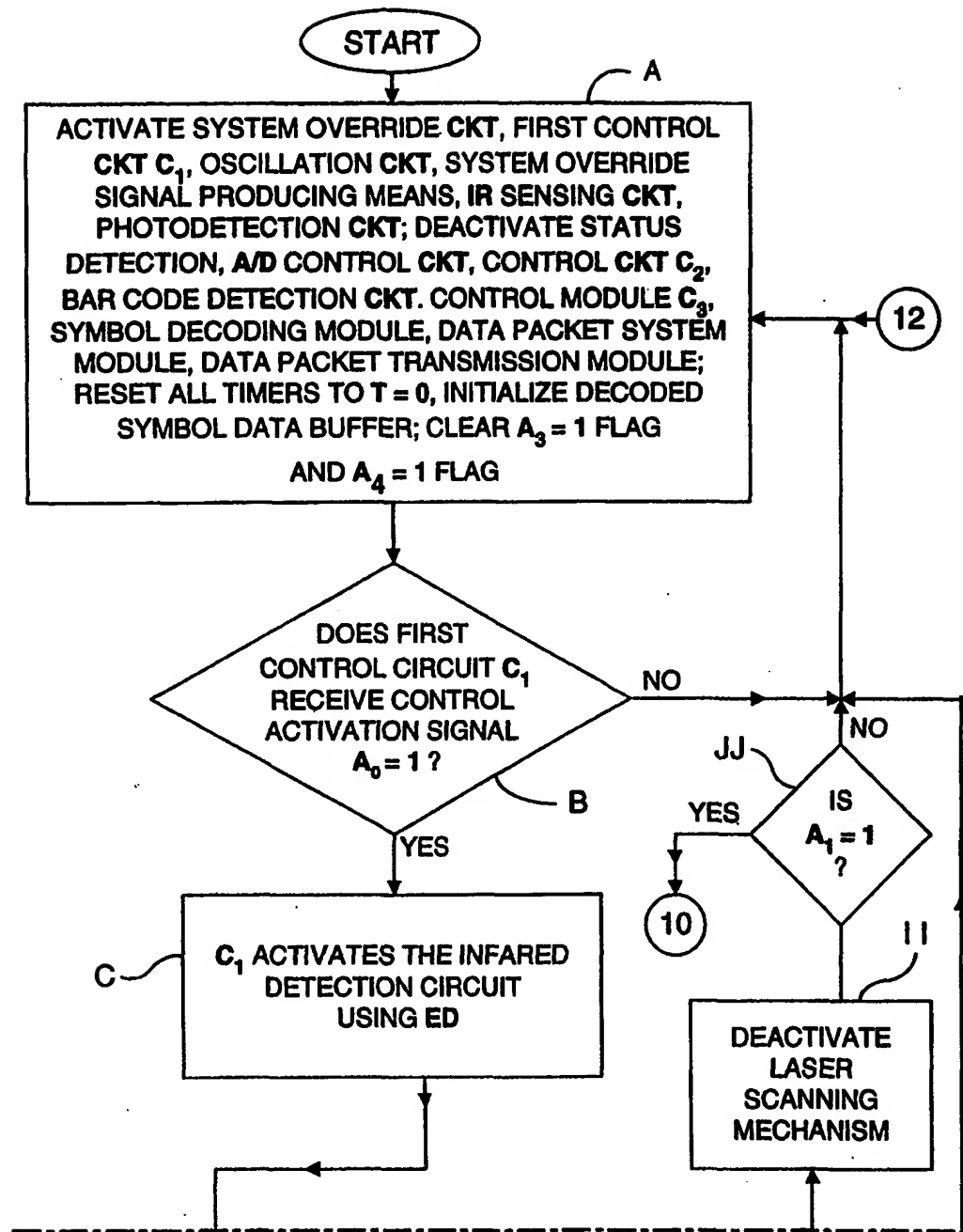


FIG. 35A1

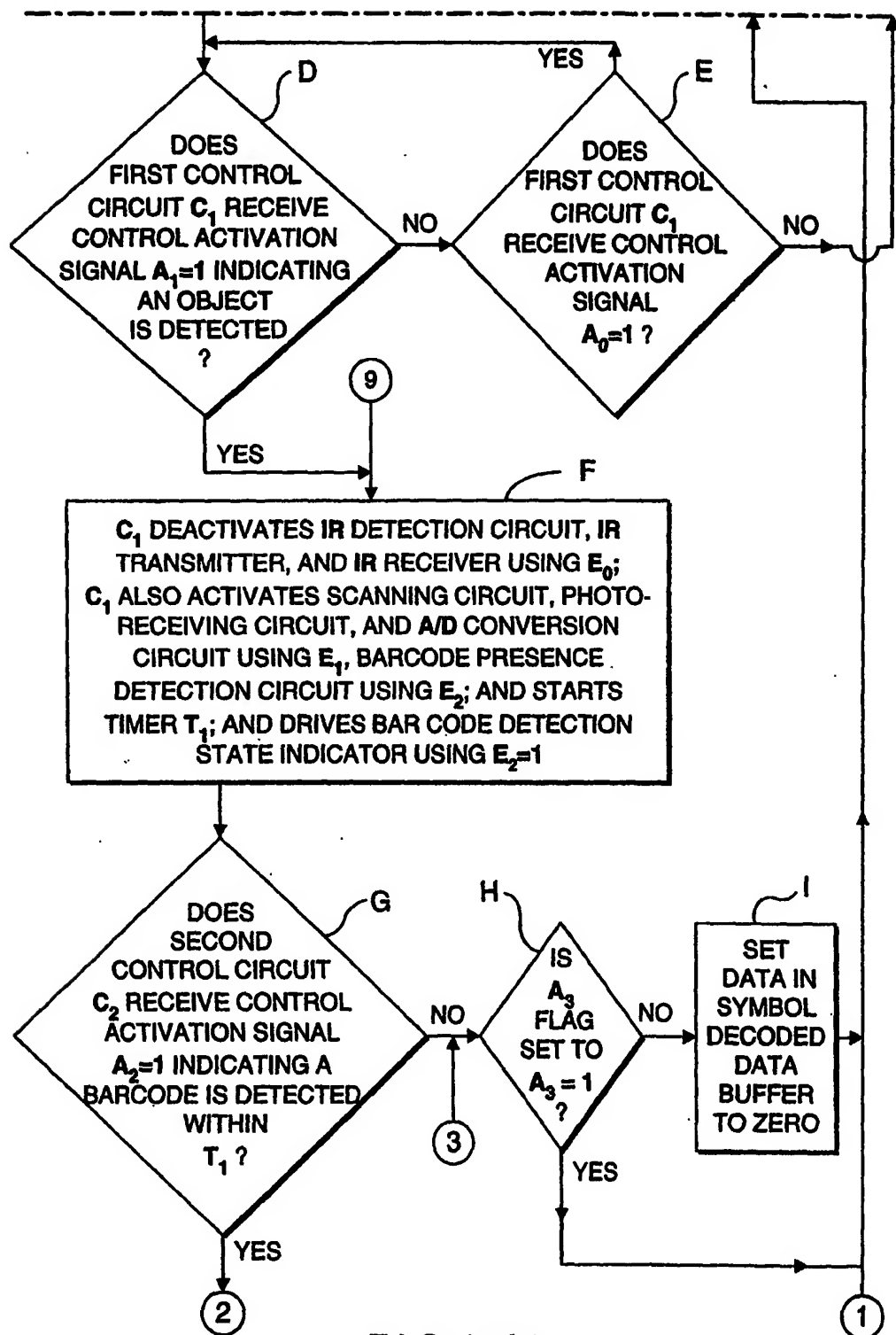


FIG. 35A2

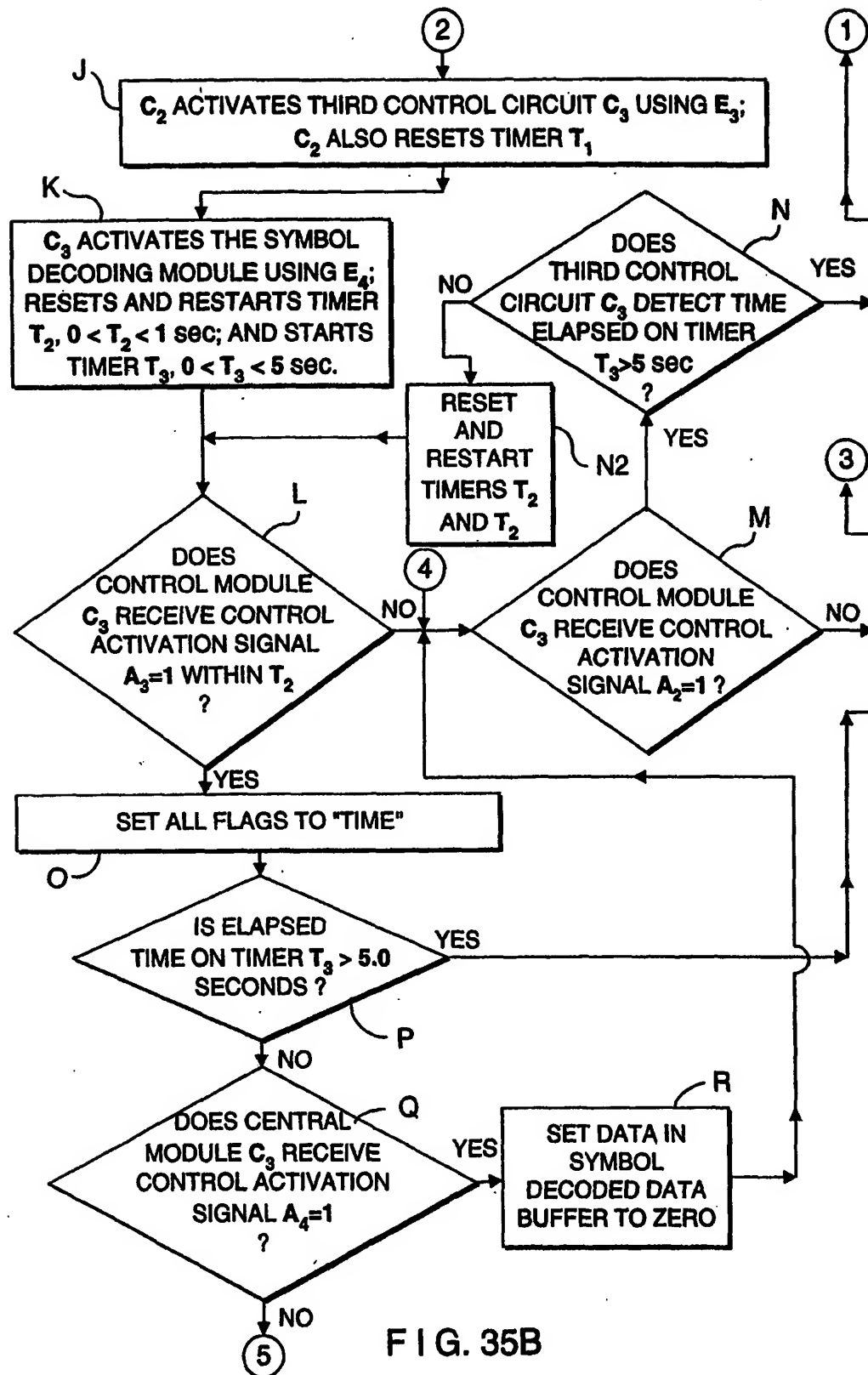


FIG. 35B

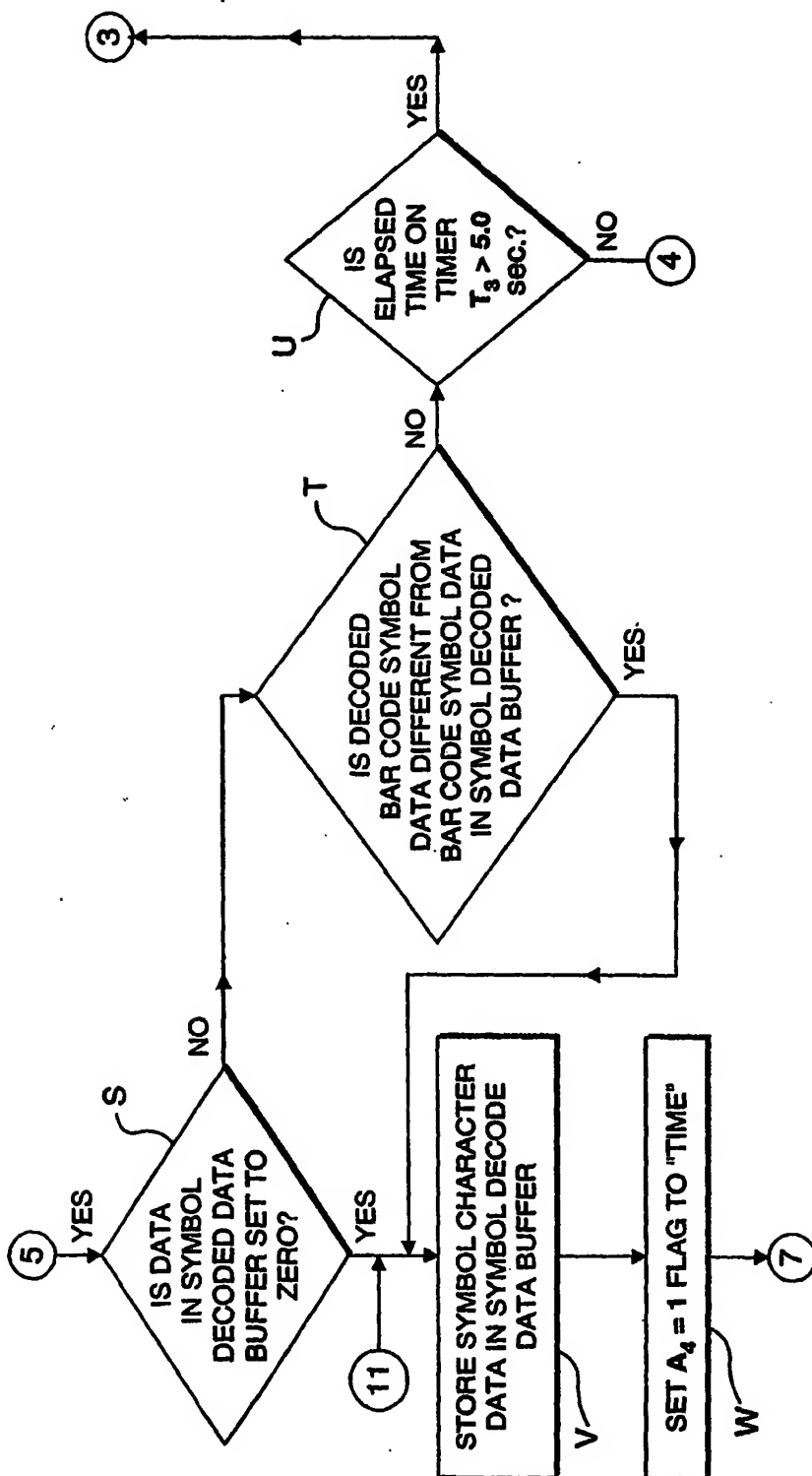


FIG. 35C

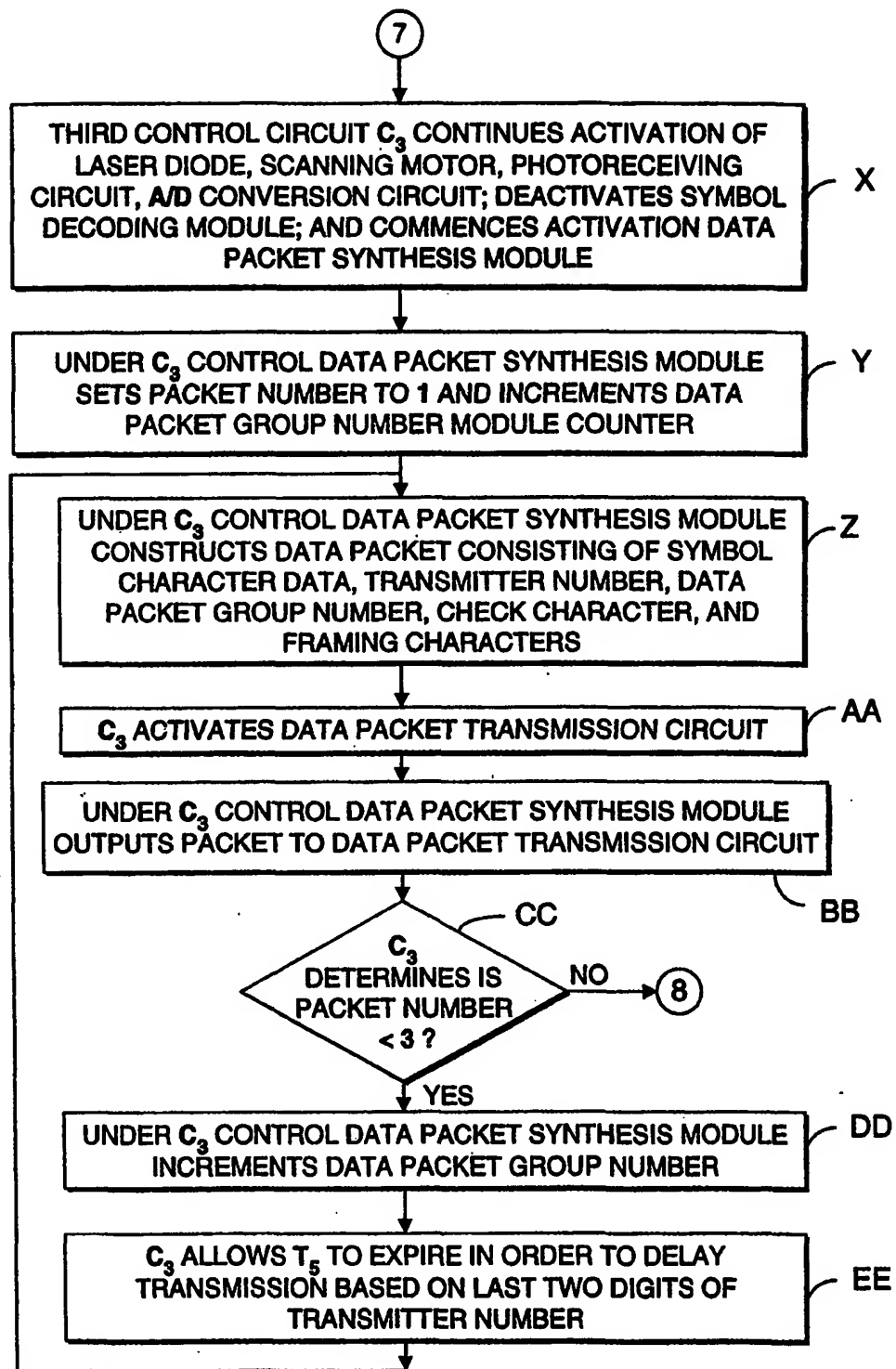


FIG. 35D

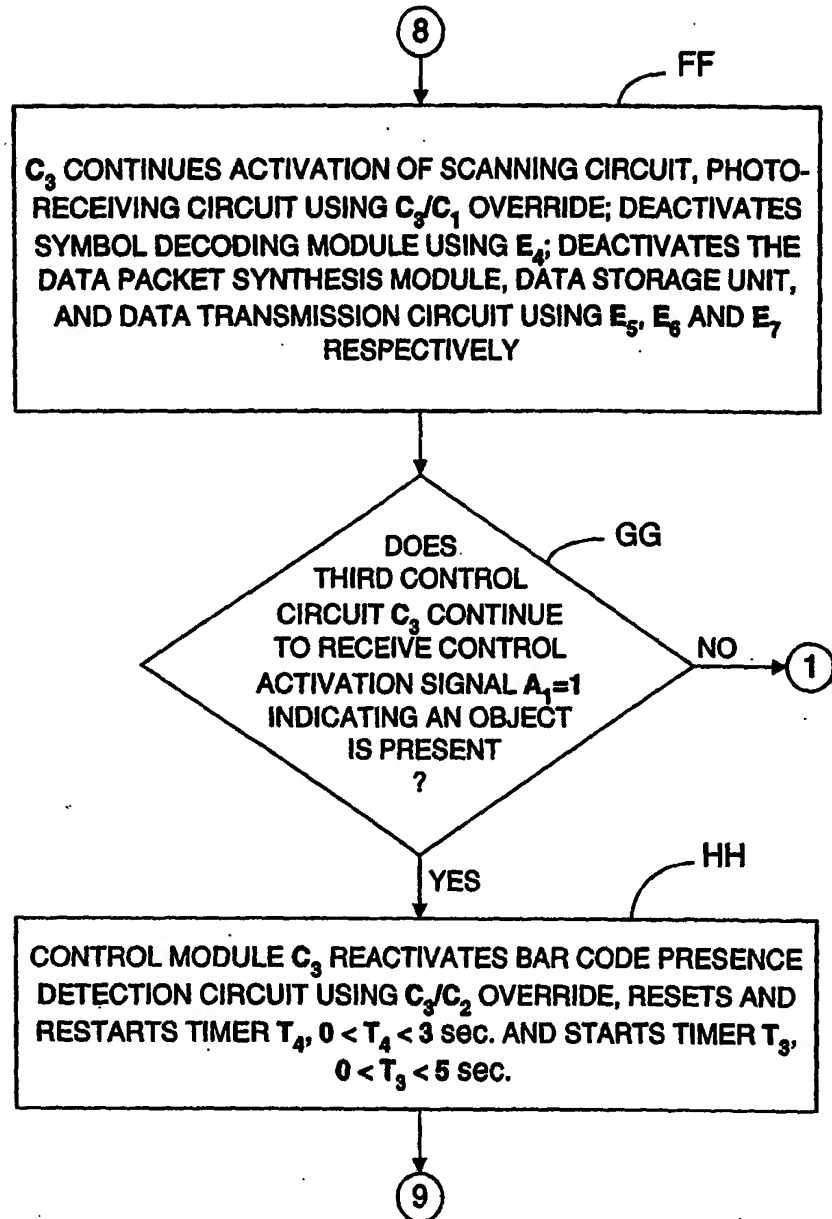


FIG. 35E

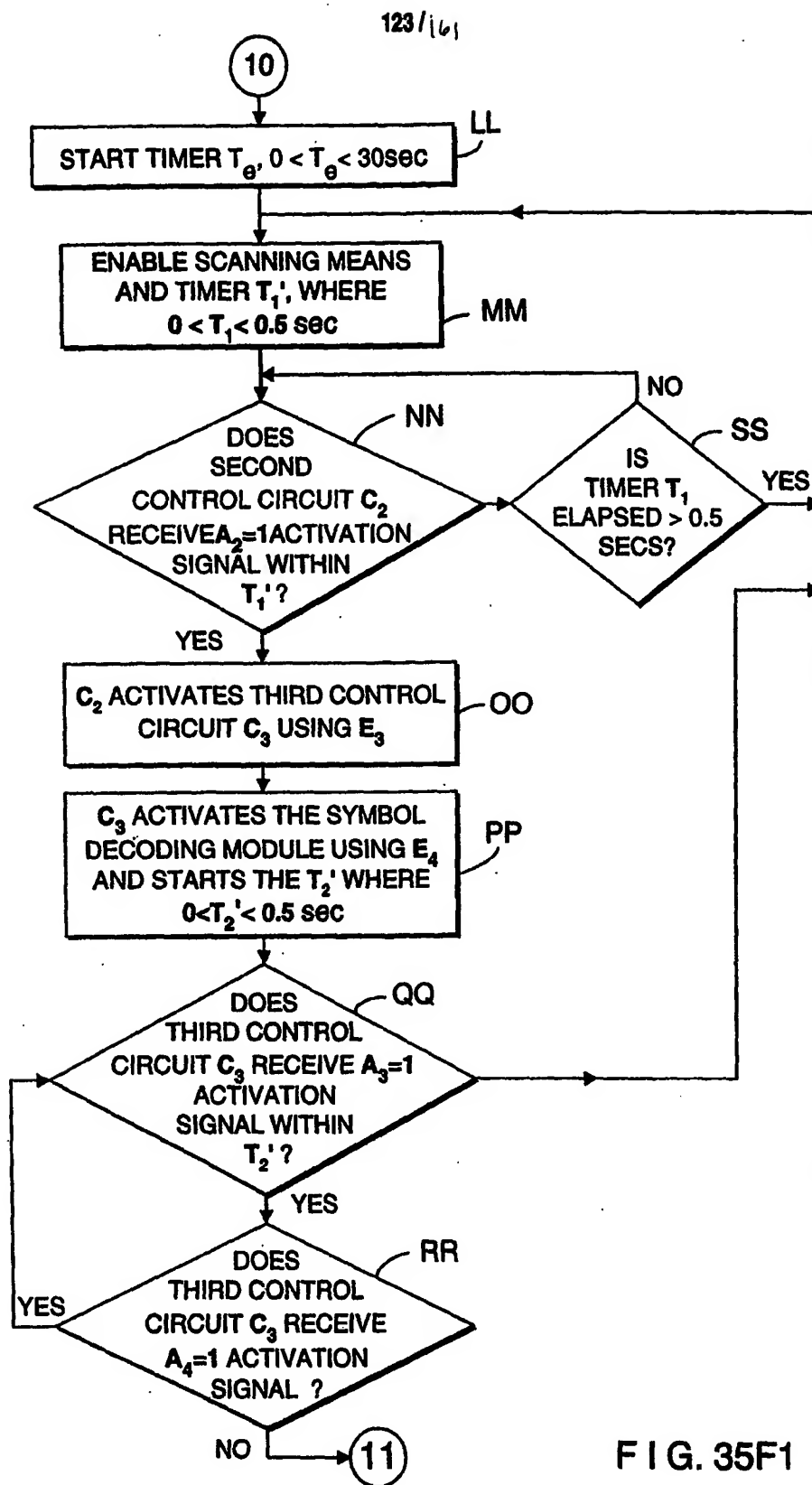
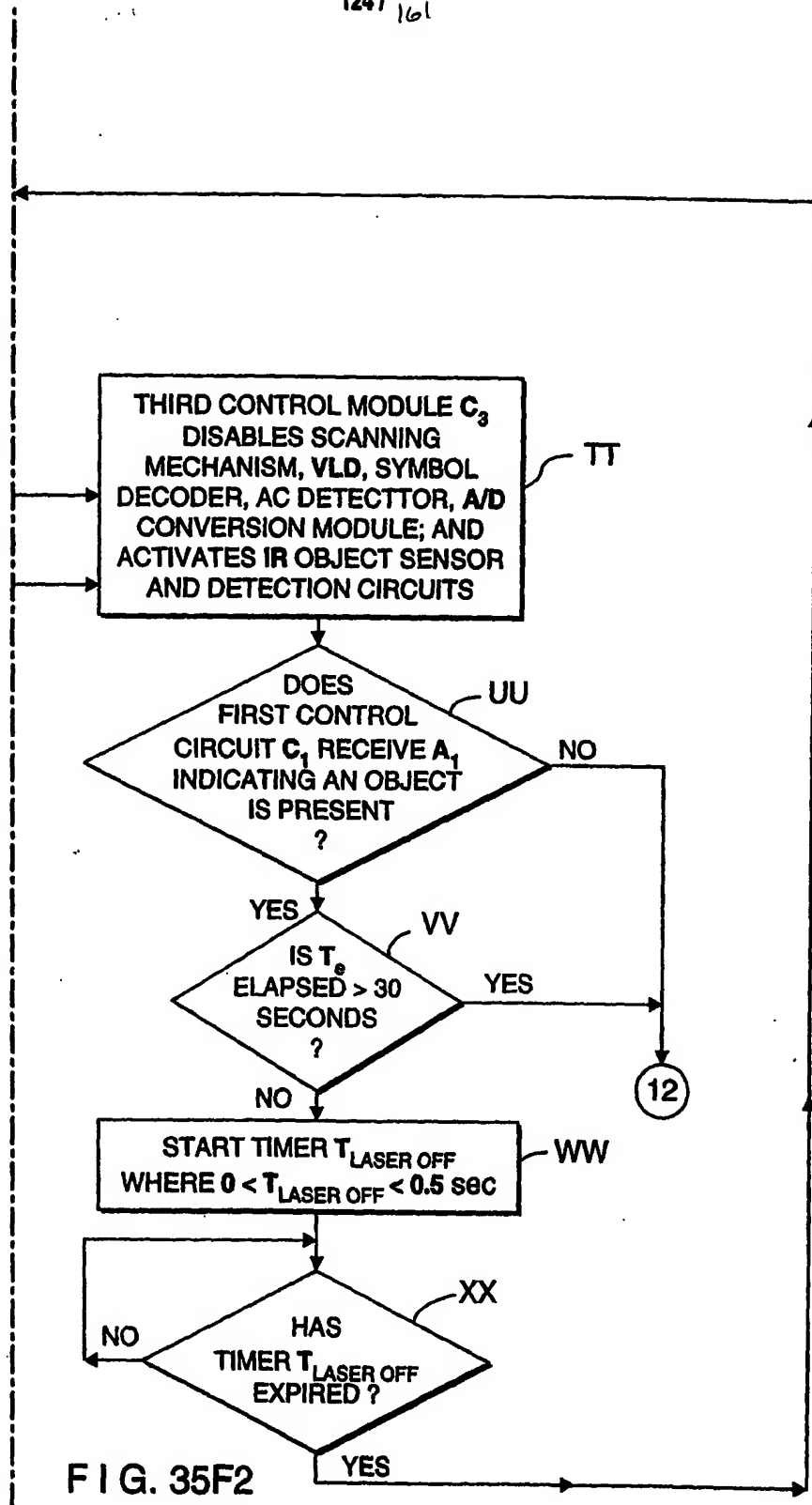


FIG. 35F1



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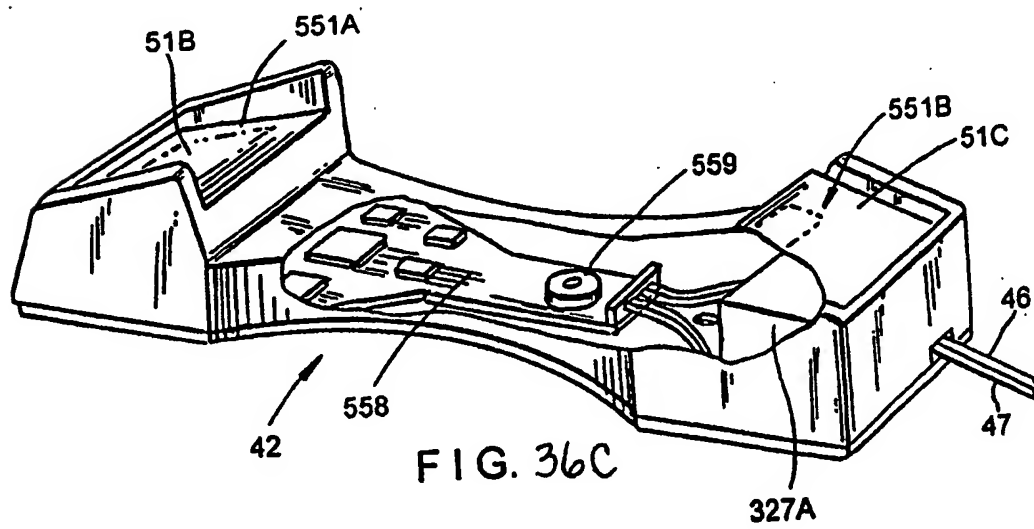
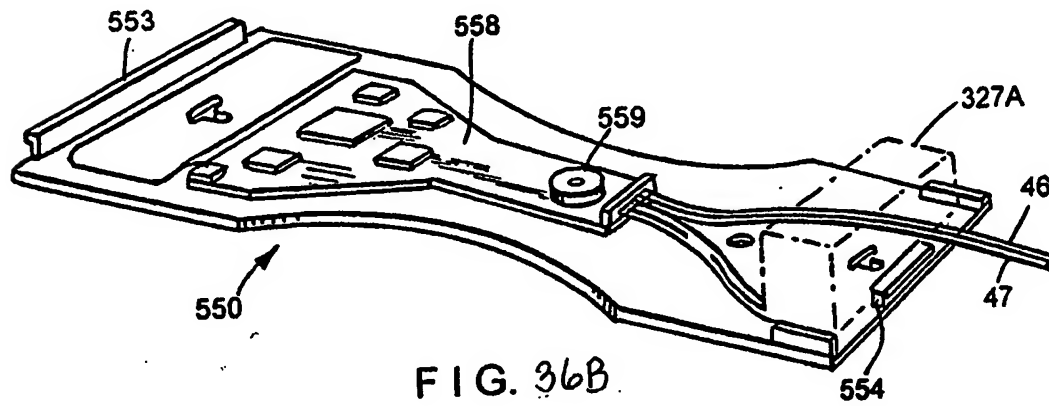
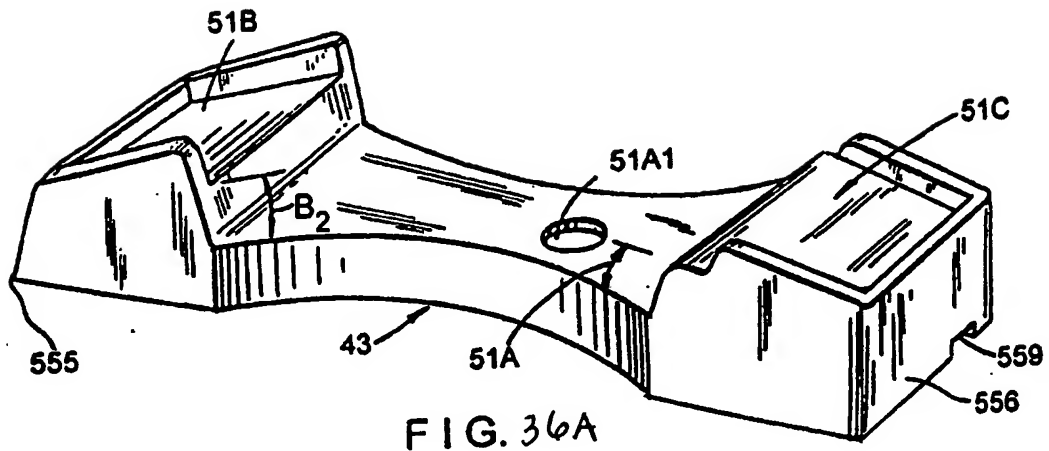
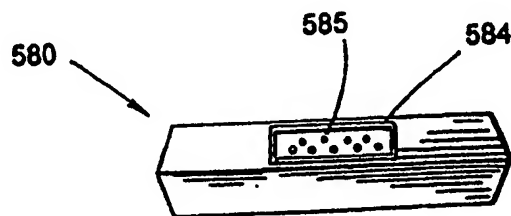
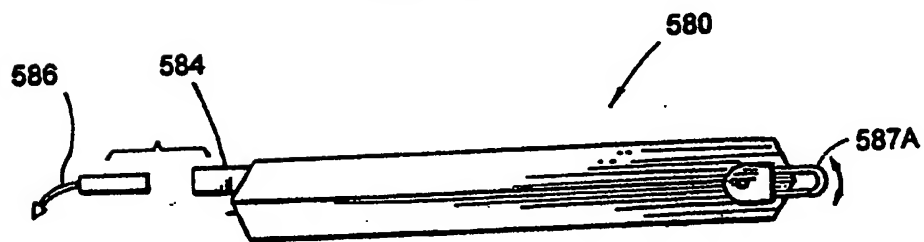
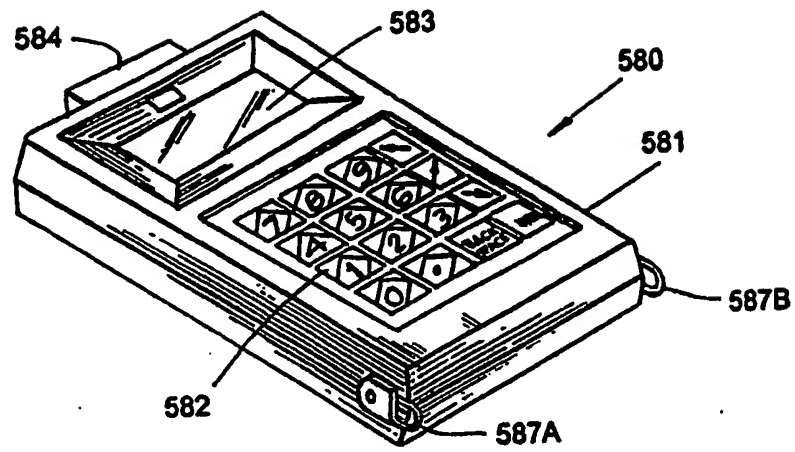




FIG. 37

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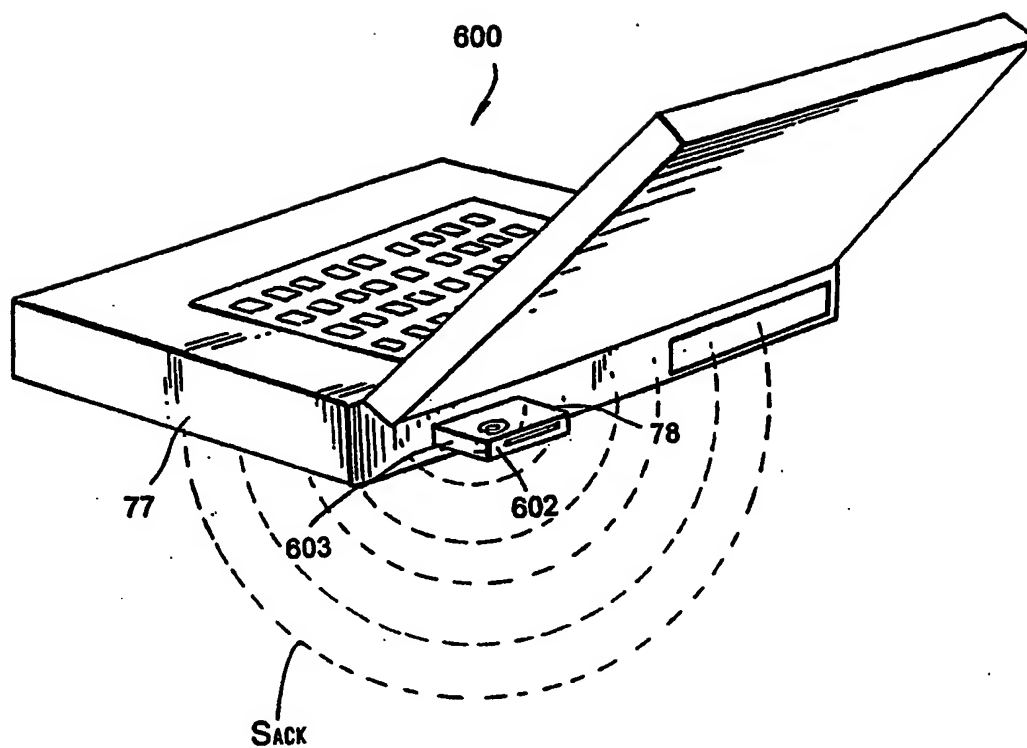
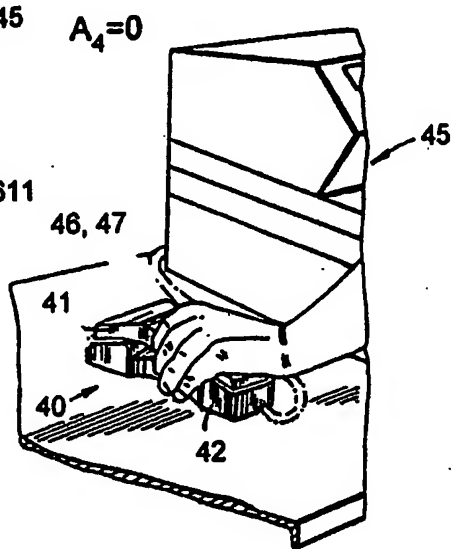
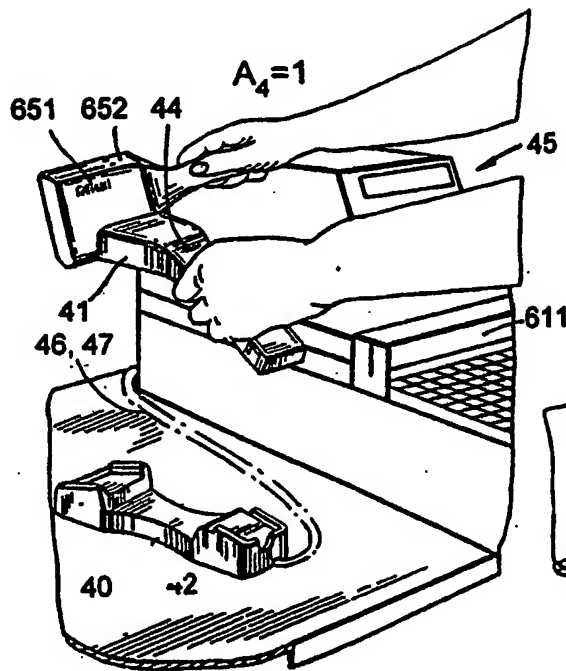
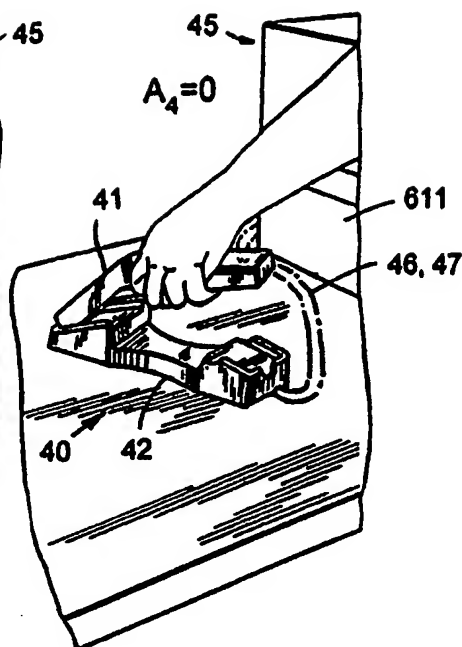
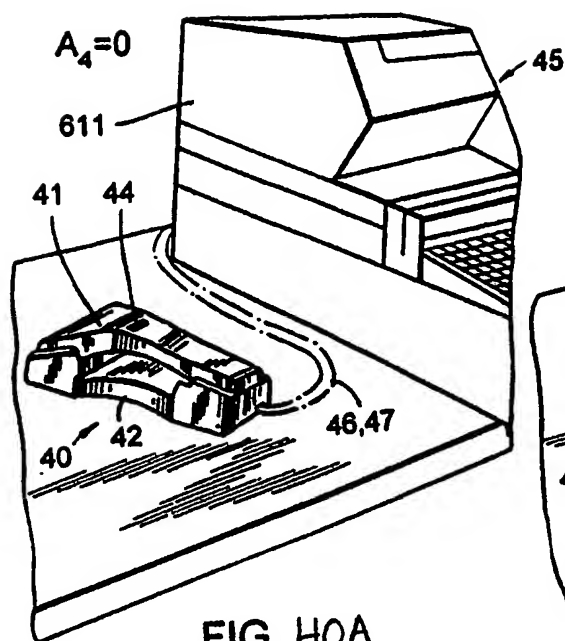
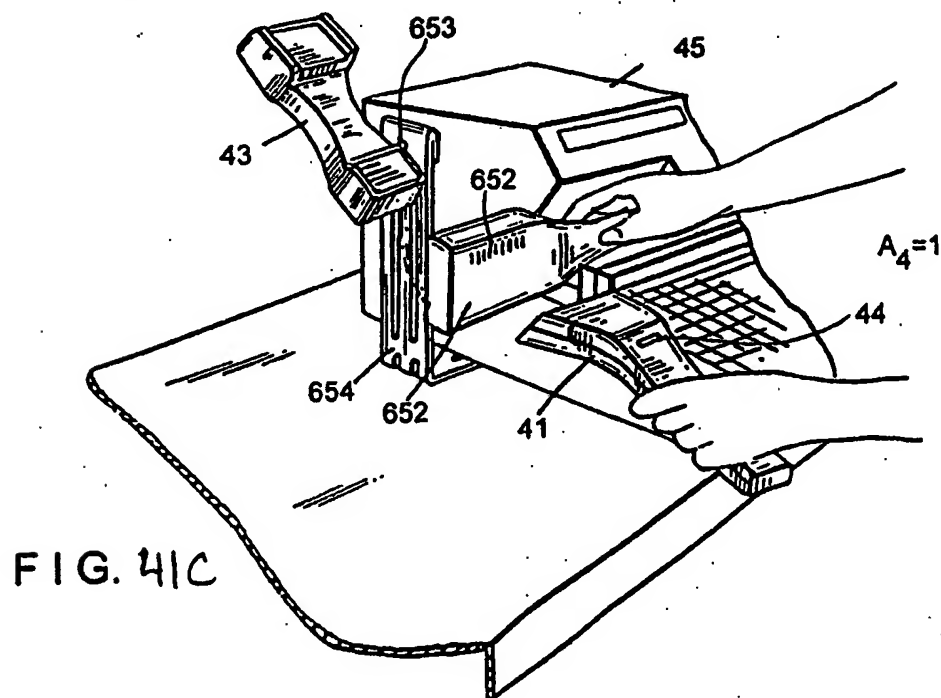
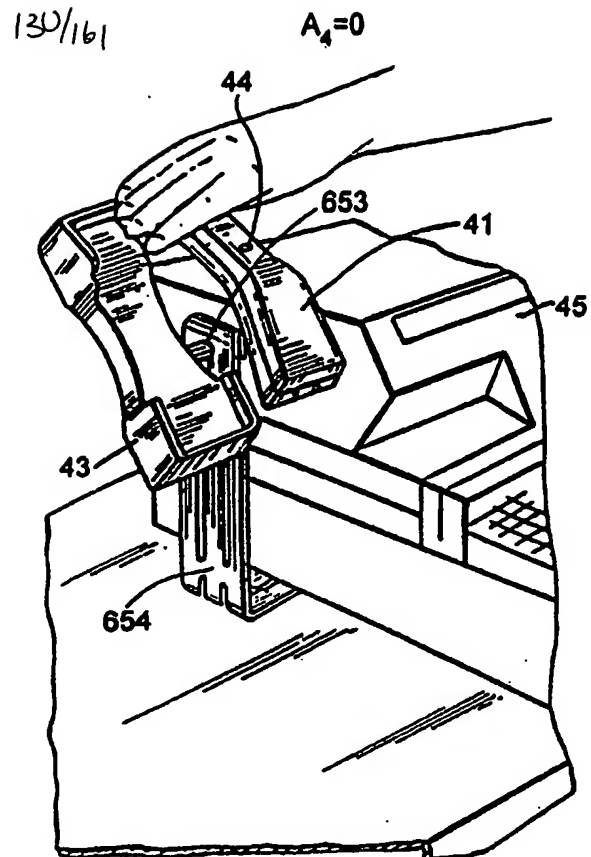
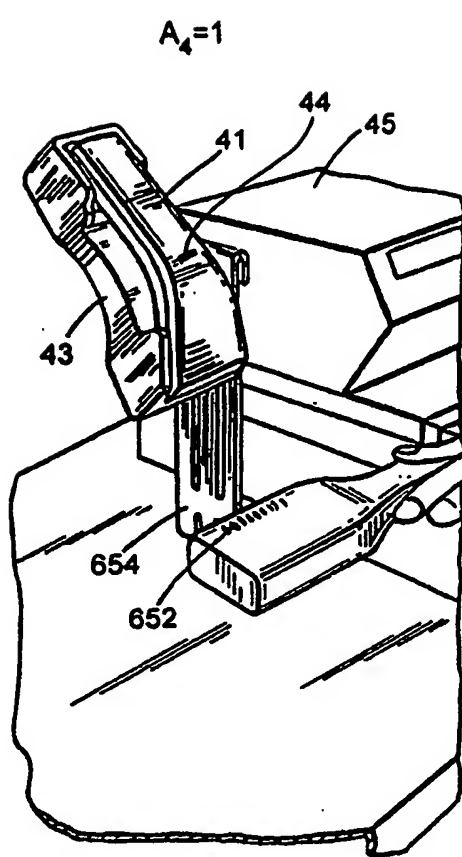
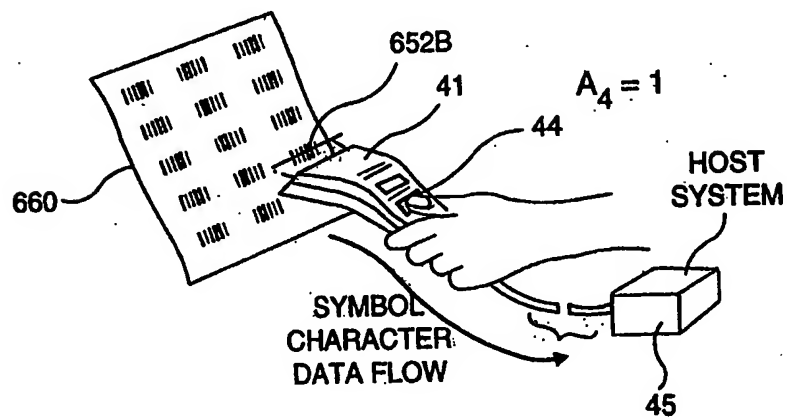
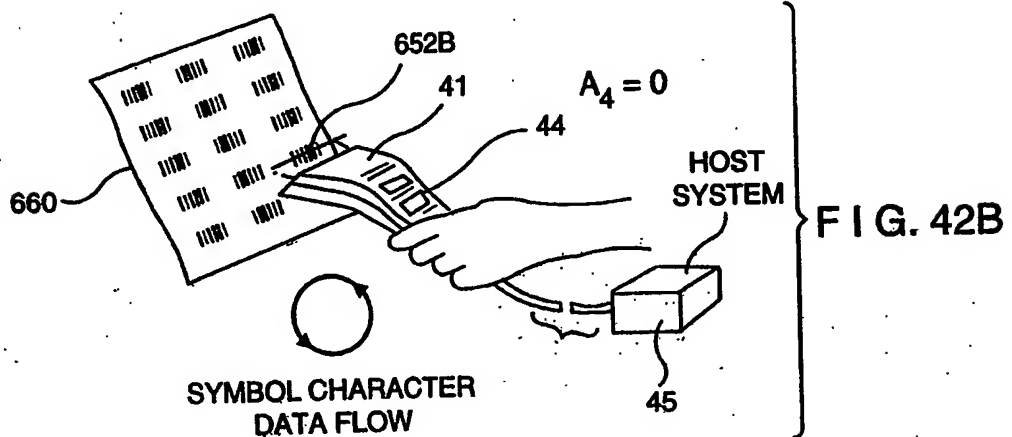
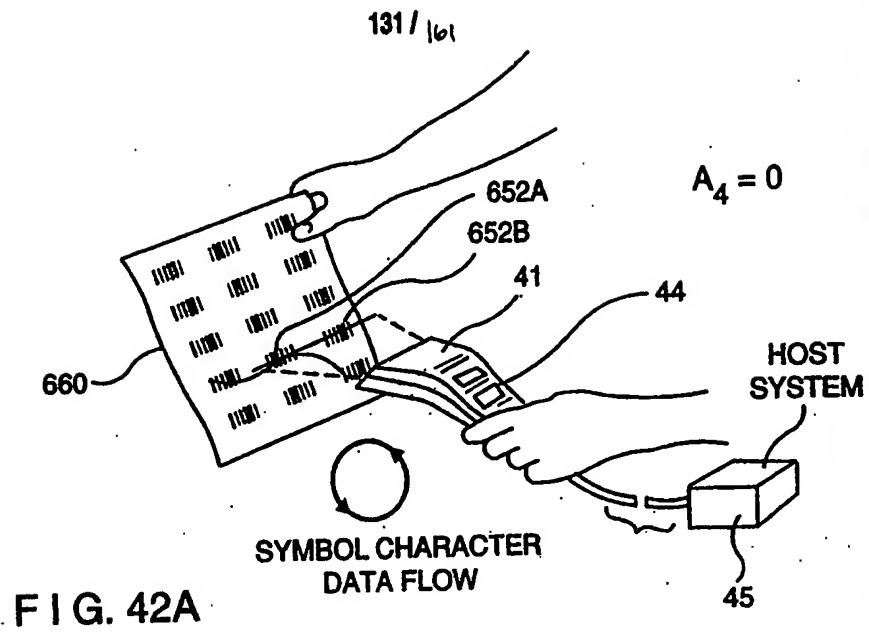


FIG. 39

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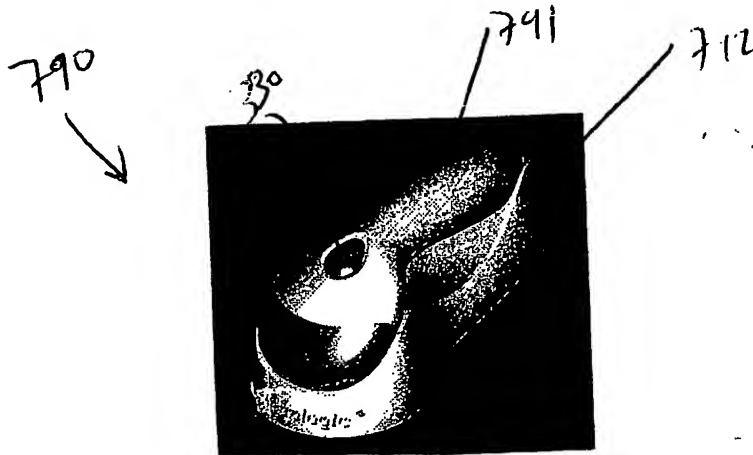


FIG. 43A



712 FIG. 43B

FIG. 43C

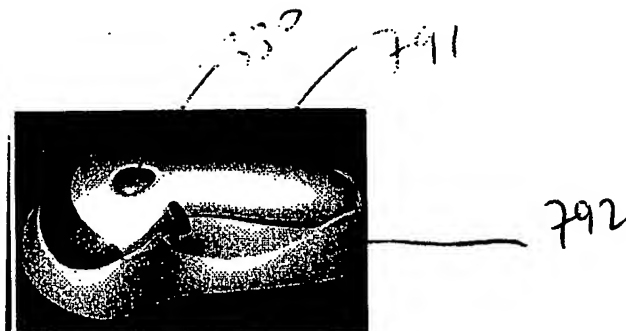


FIG. 43D

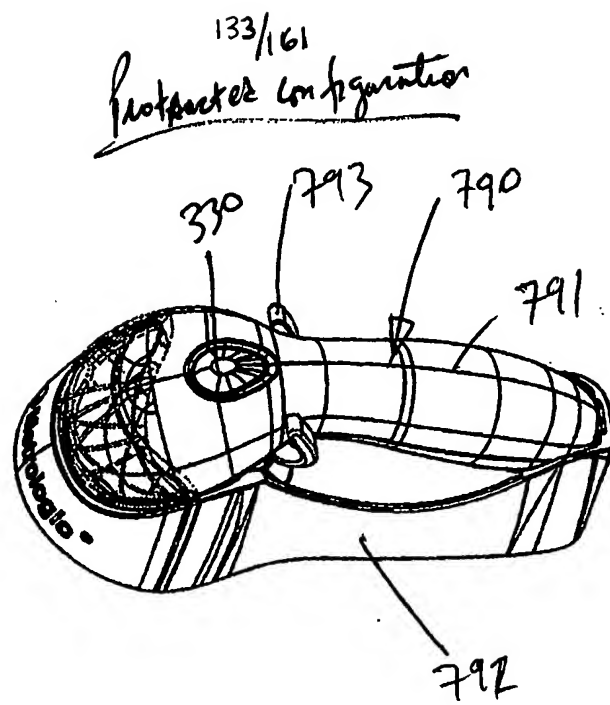


FIG. 43 F

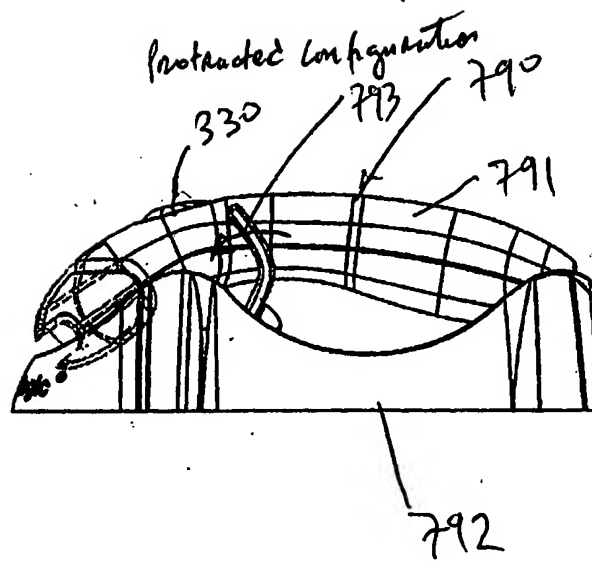


FIG. 43 E

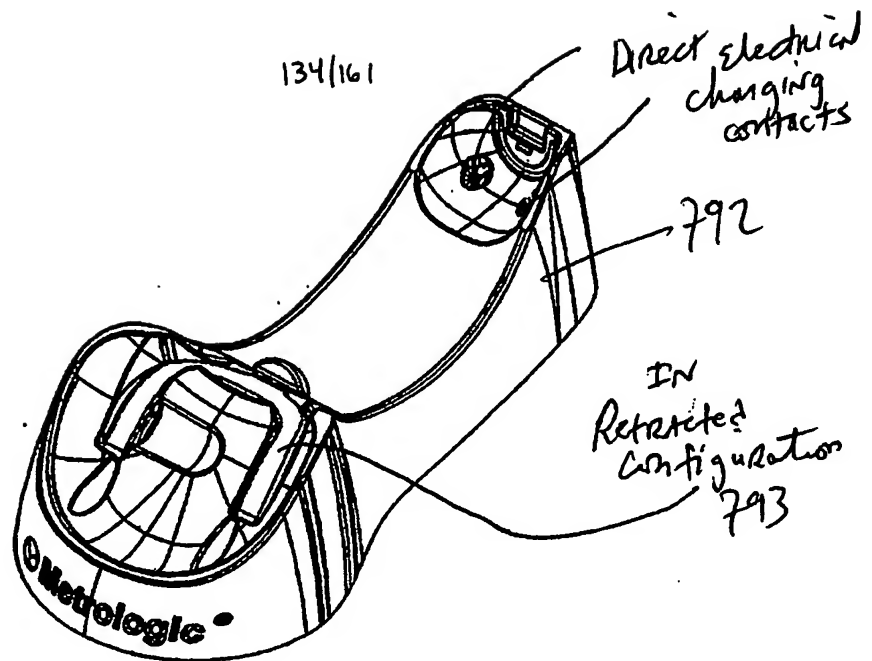


FIG. 43G

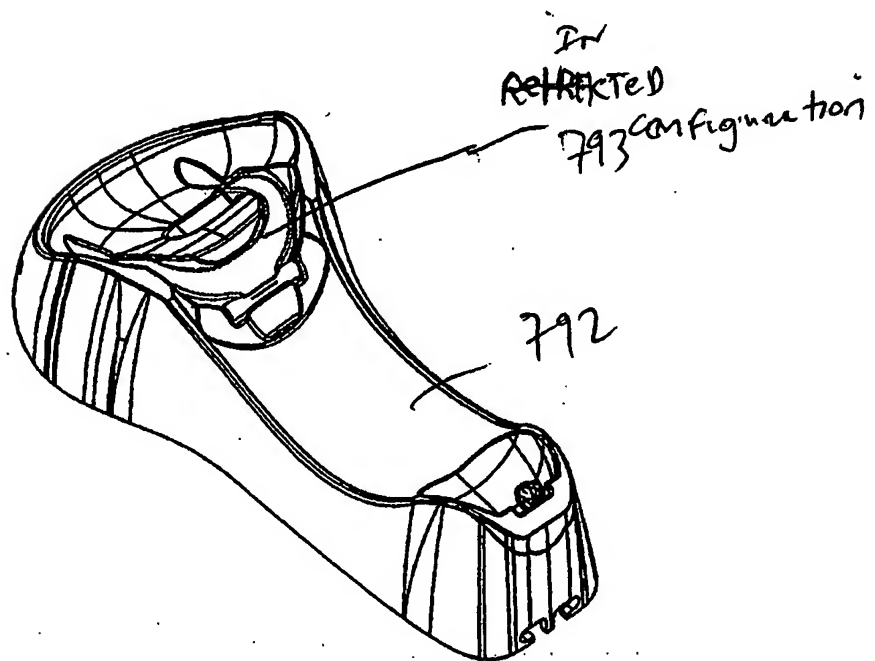


FIG. 43H

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Retracted Configuration
793



FIG. 43I 792

Projected Configuration
793

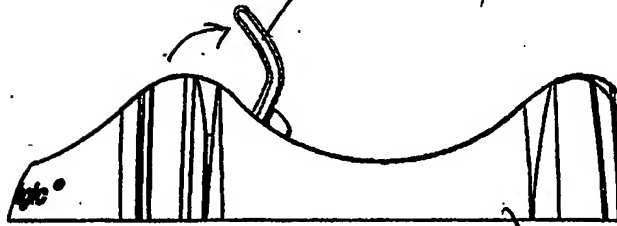


FIG. 43J 792

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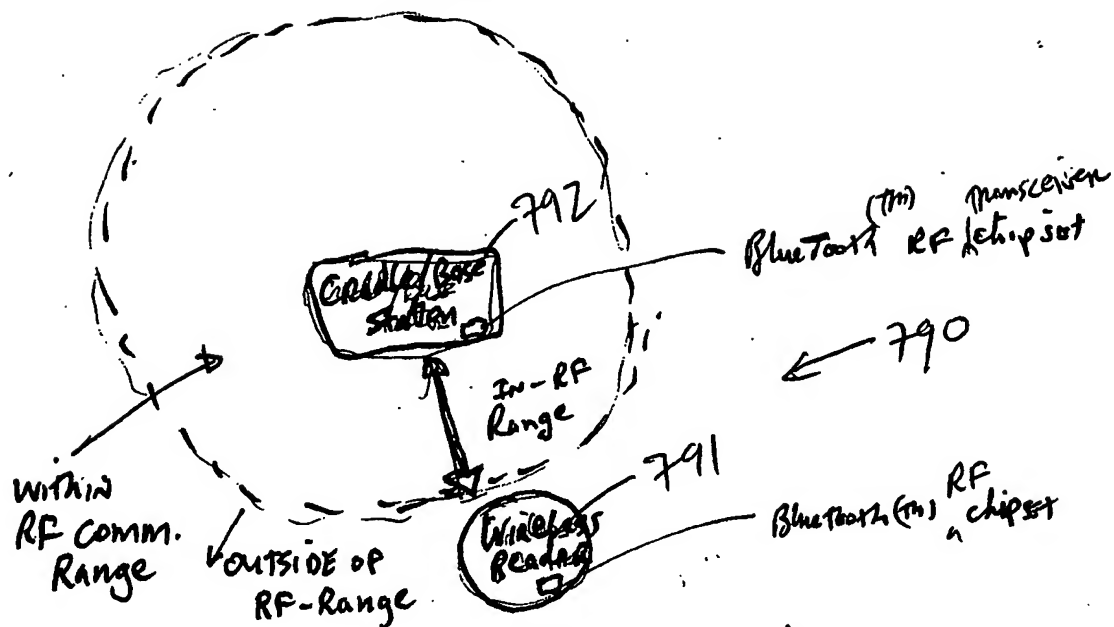


FIG. 44A1

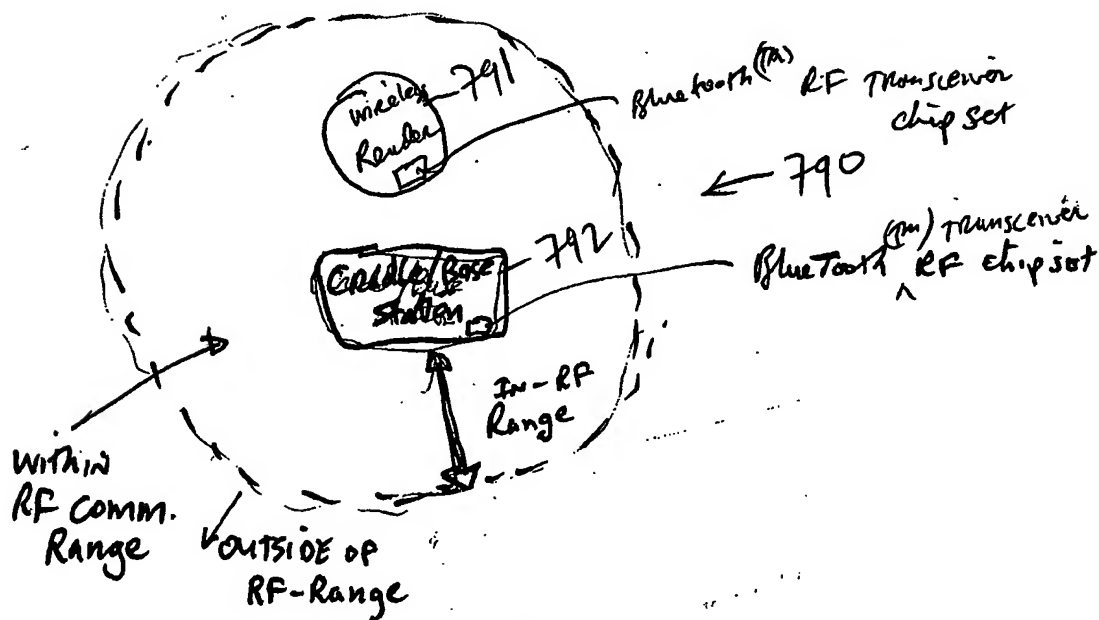


FIG. 44A2

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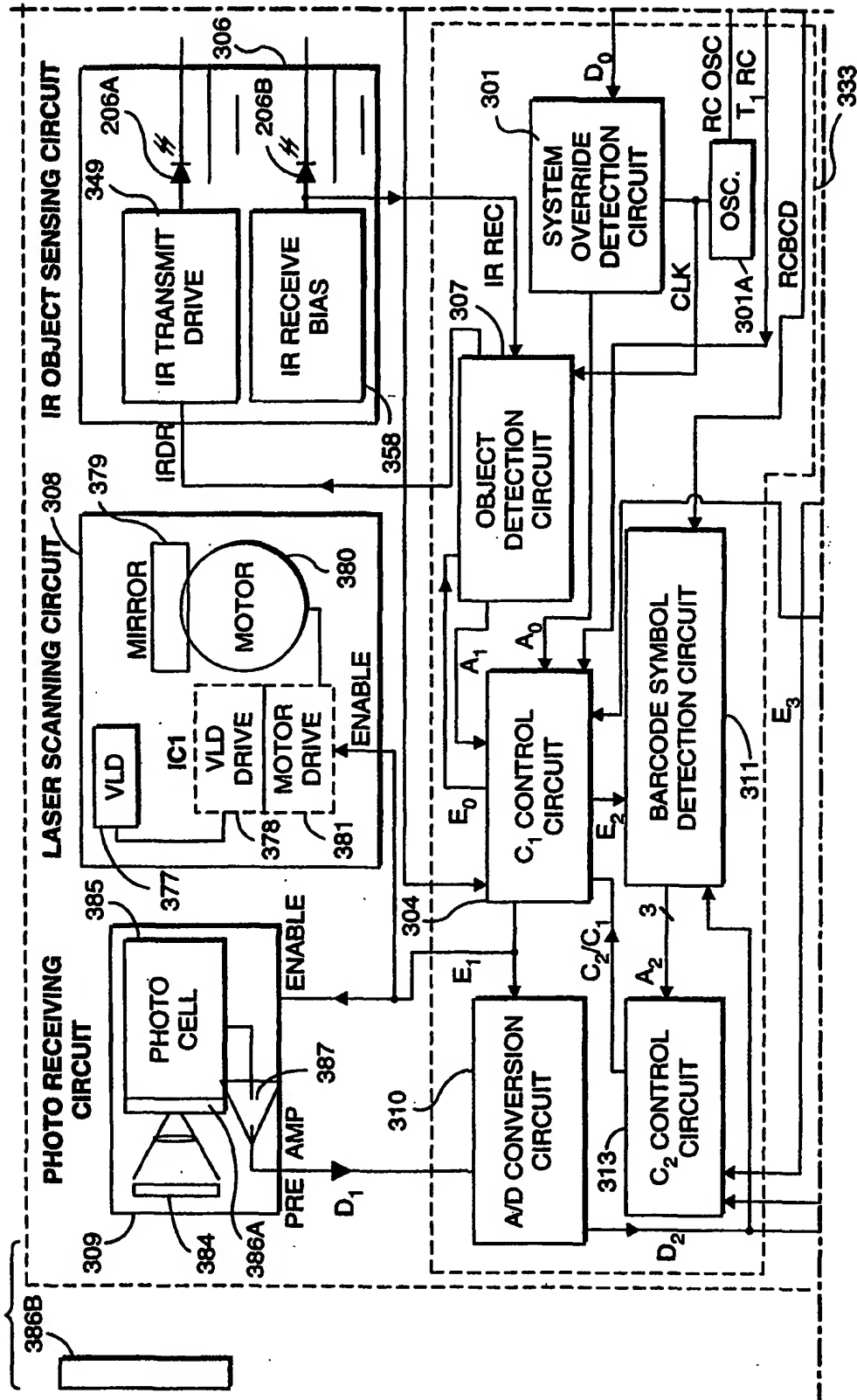


FIG 45A1

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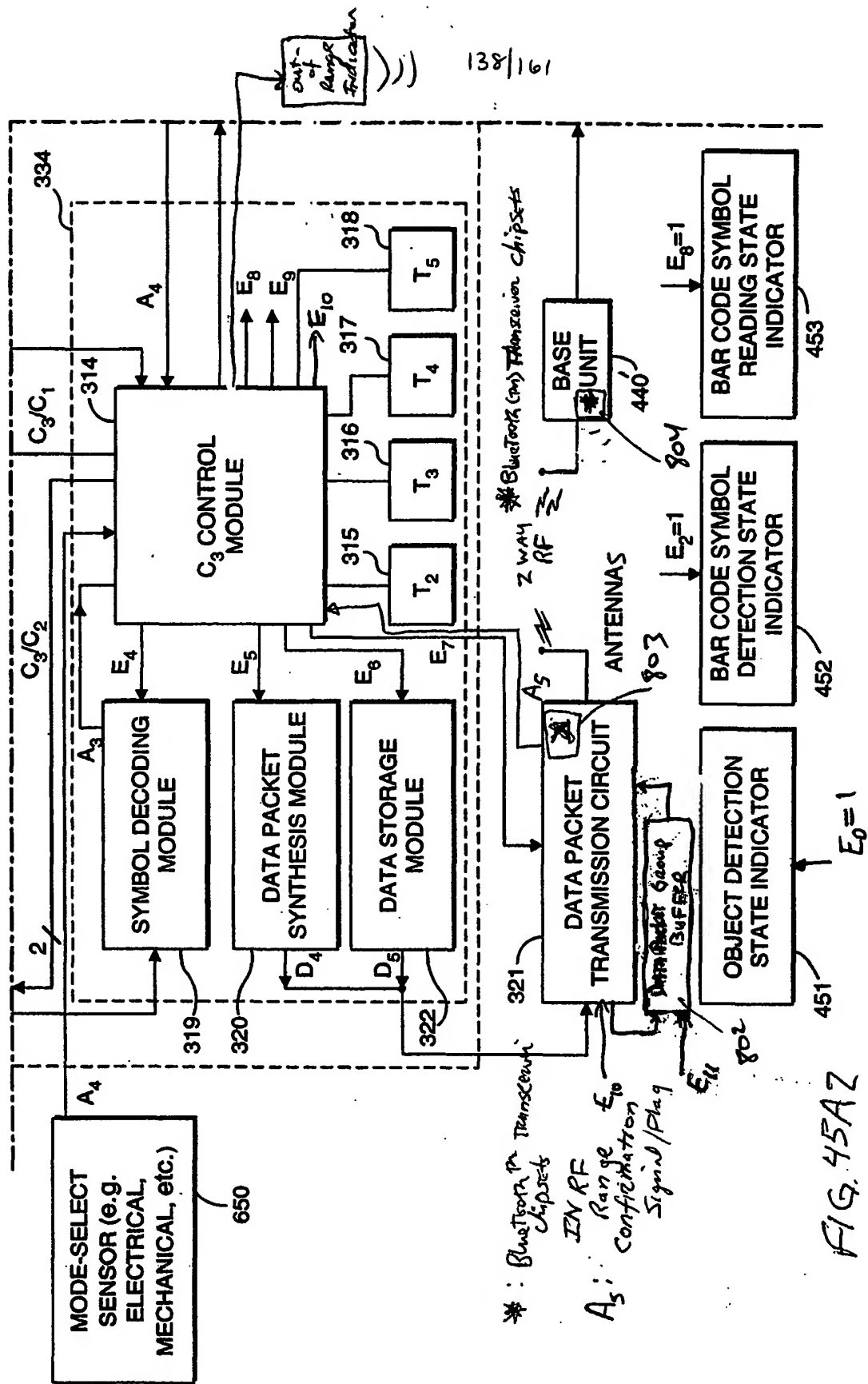
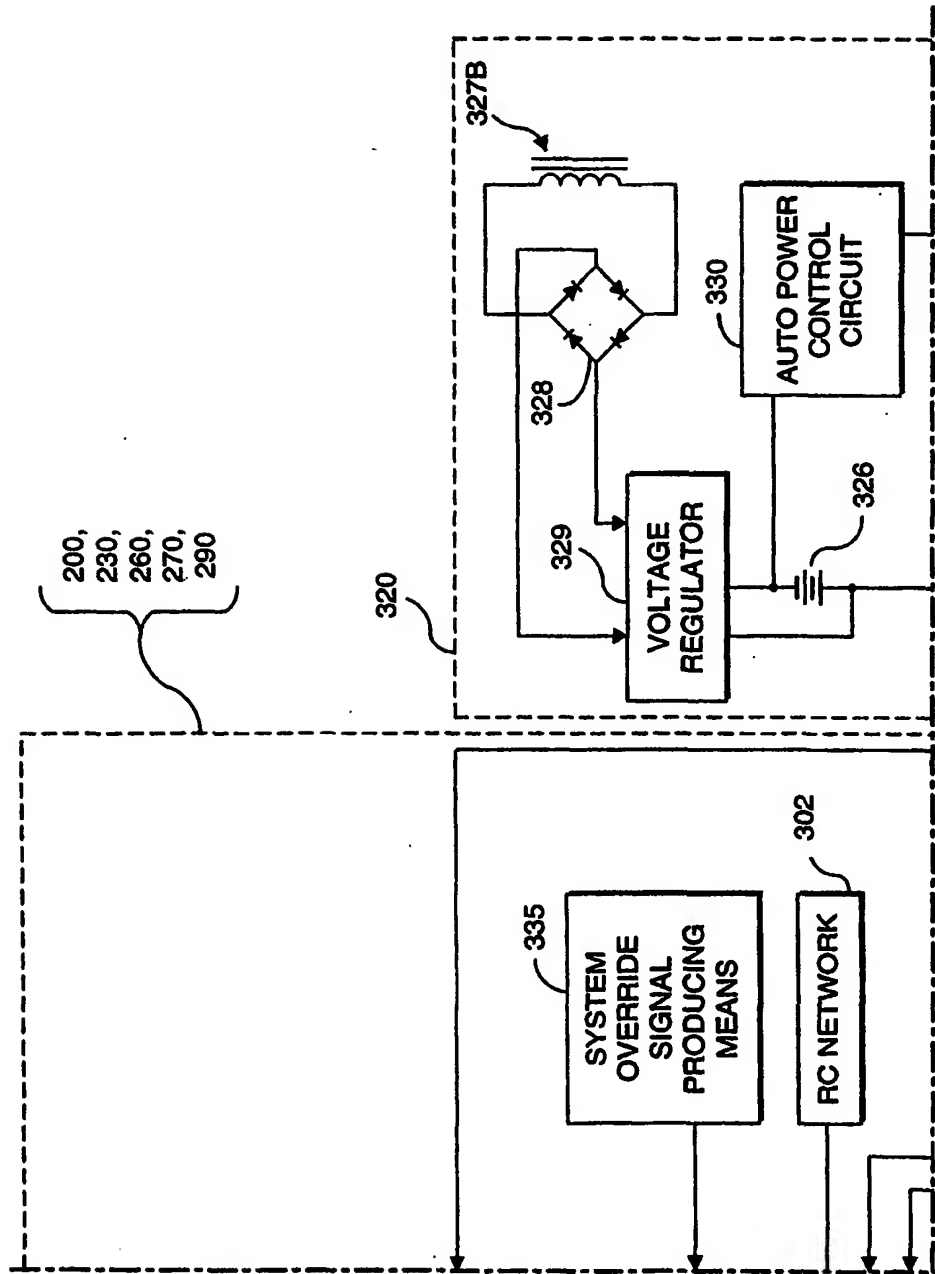


FIG. 45A2



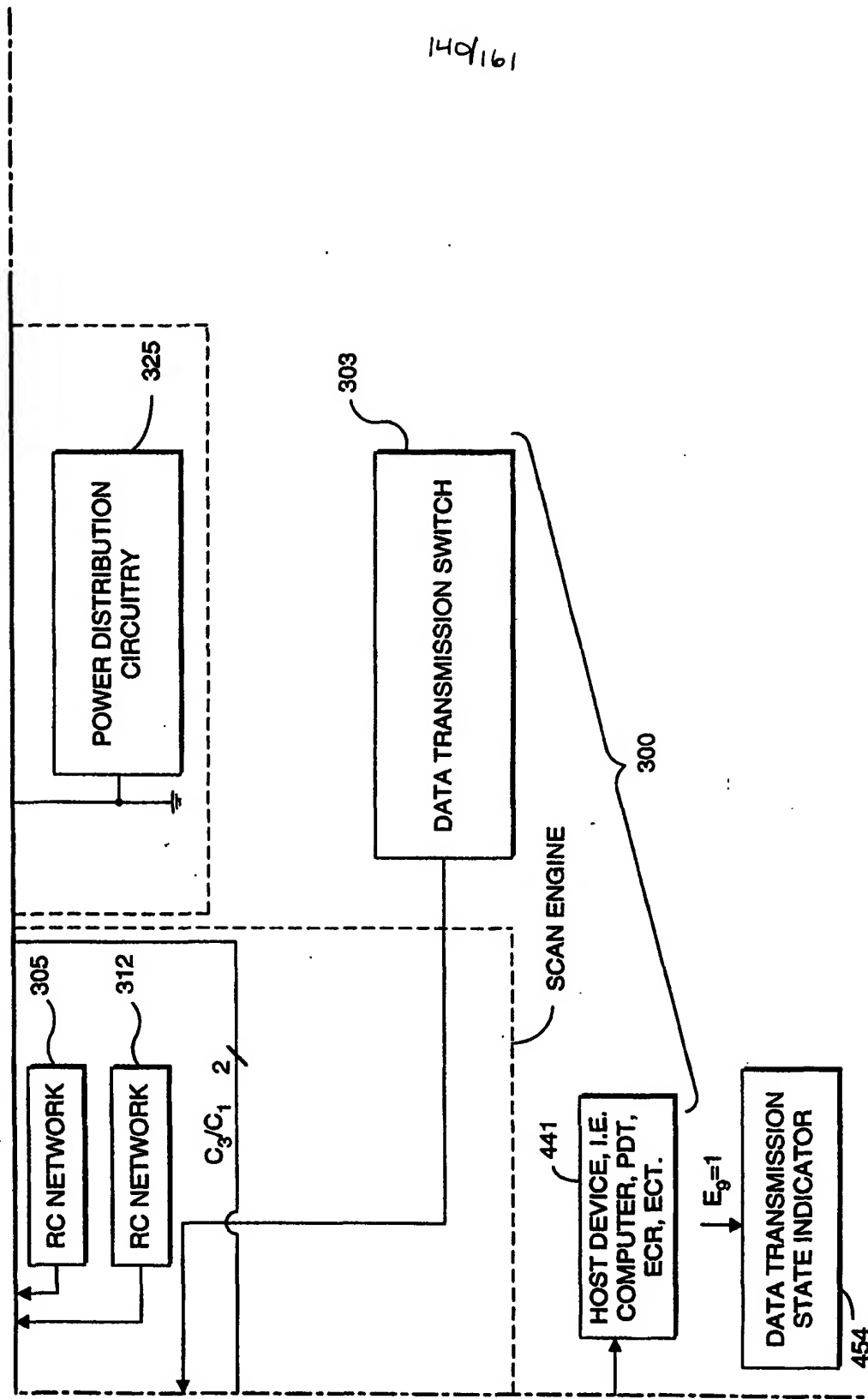
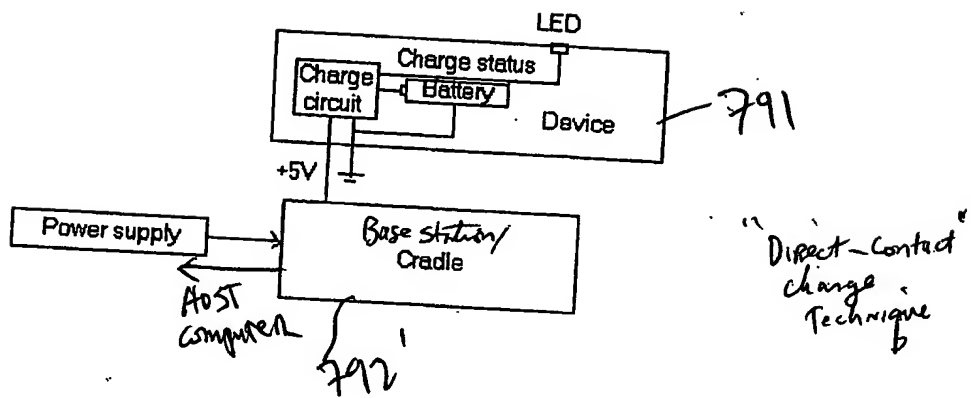


FIG. 45A4

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"Direct-Contact"
charge
Technique

FIG. 45B

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DATA Packet
Transmission VIA
2-WAY R/P WITH Automatic
R/P-Range Dependent
Control

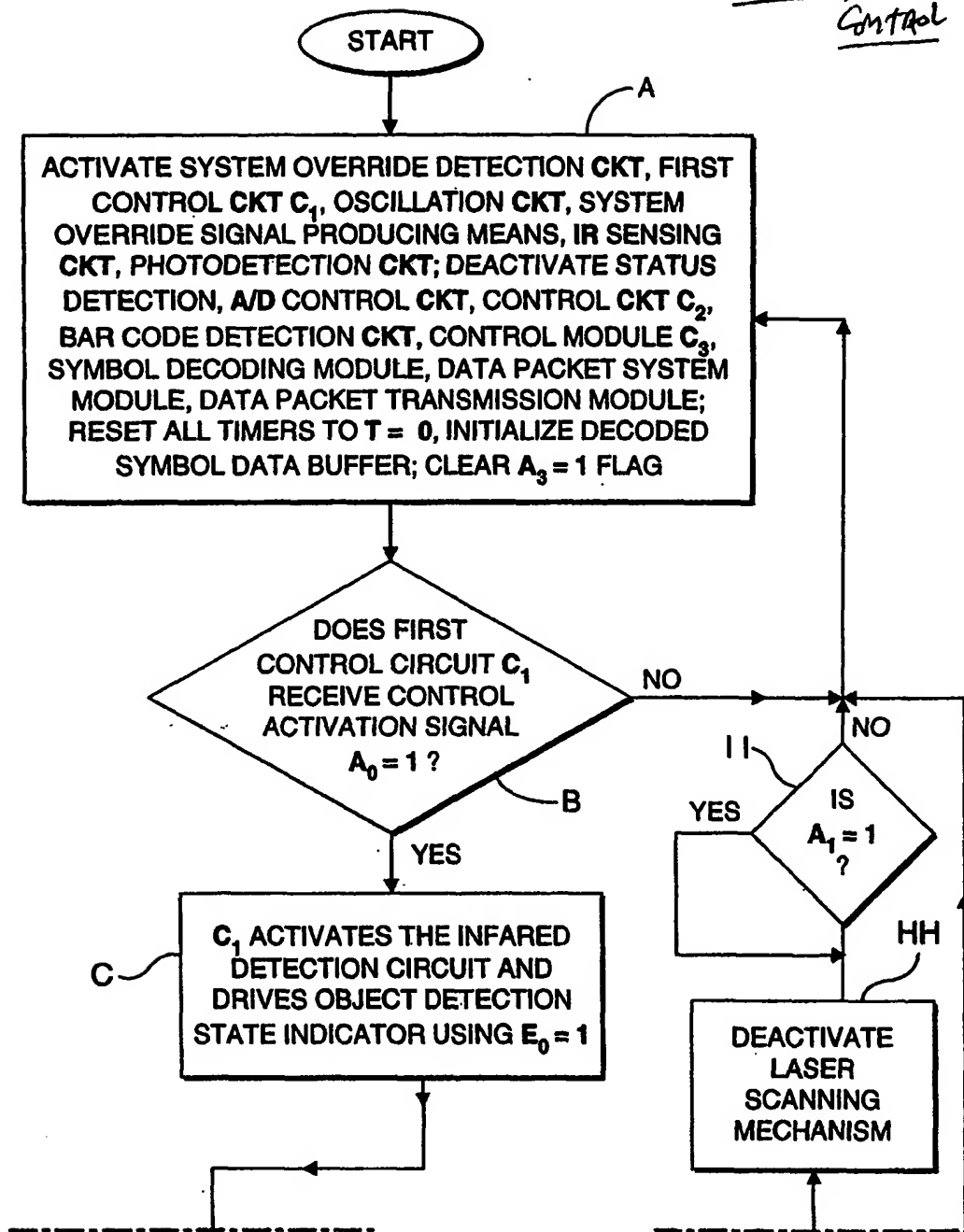
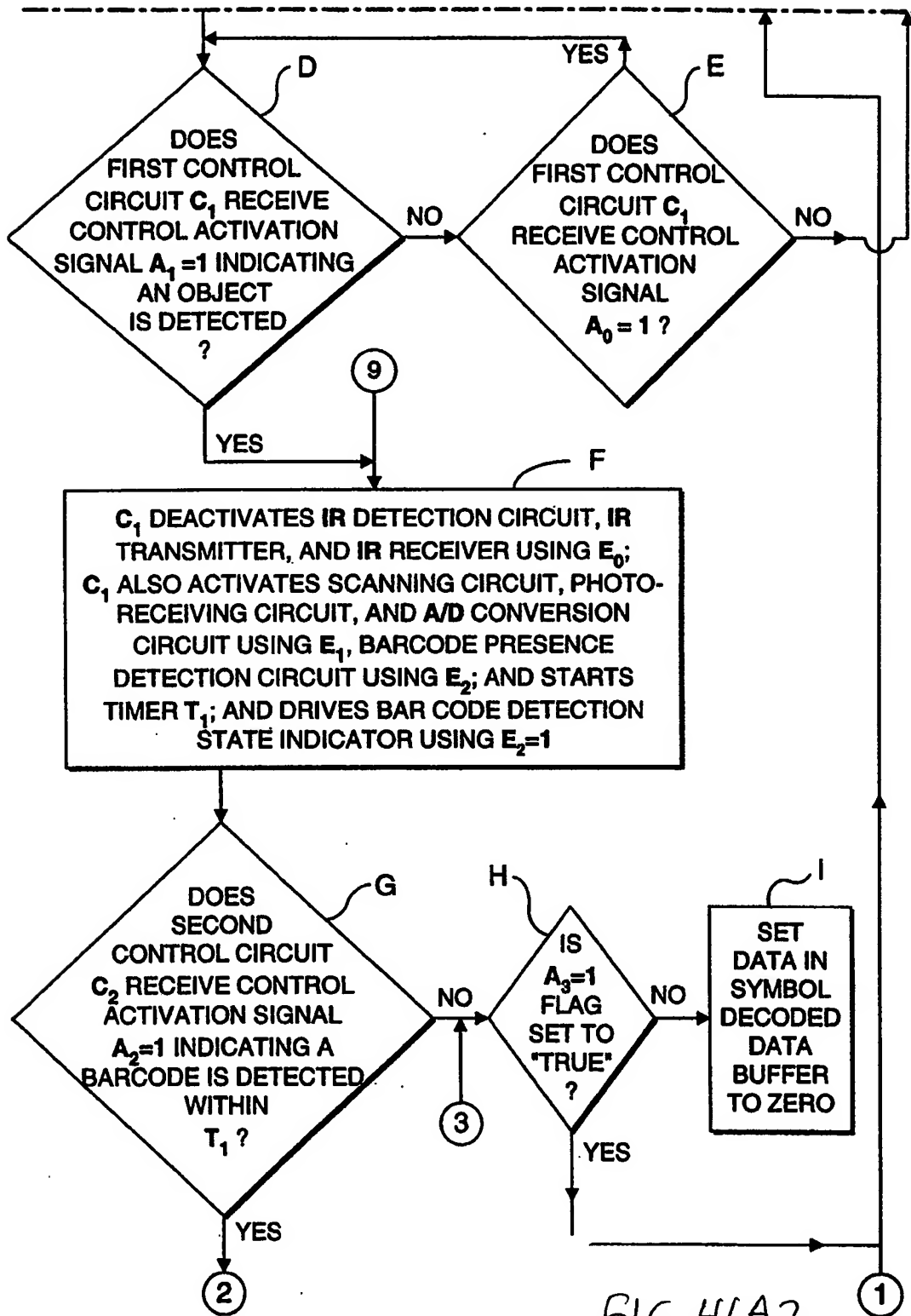
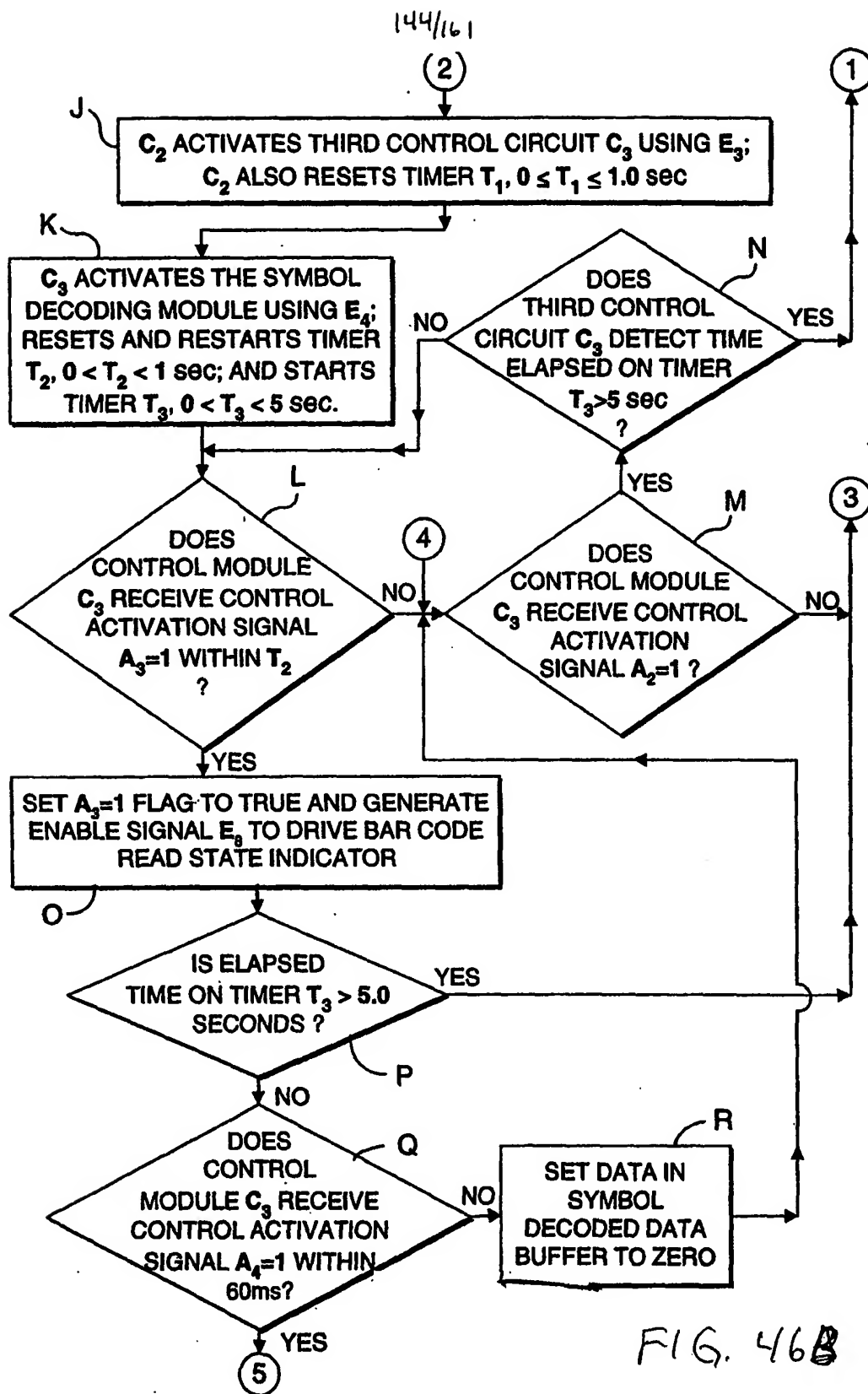


FIG. 46A1





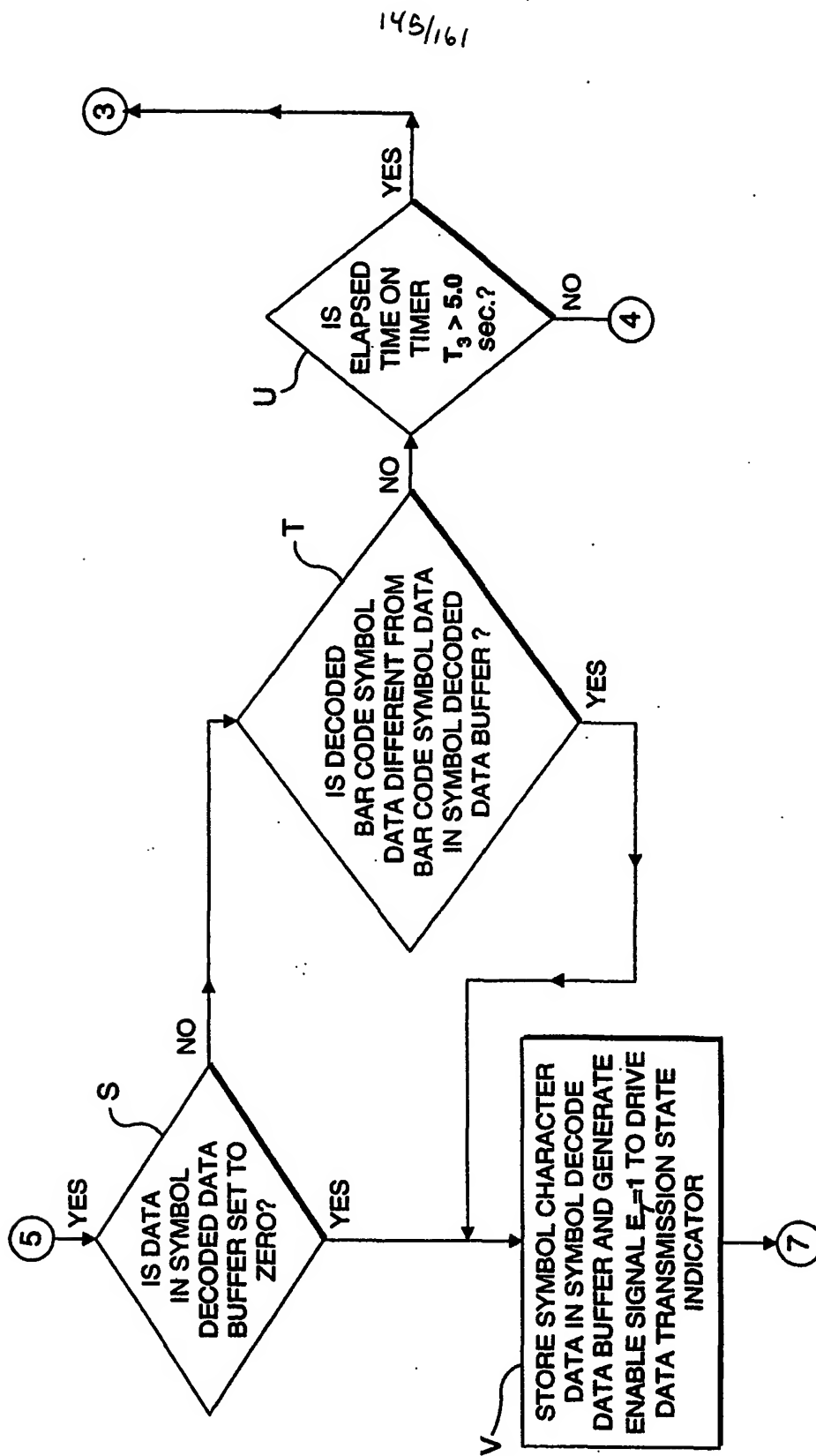


FIG. 46C1

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7

THIRD CONTROL CIRCUIT C_3 CONTINUES ACTIVATION OF LASER DIODE, SCANNING MOTOR, PHOTORECEIVING CIRCUIT, A/D CONVERSION CIRCUIT; DEACTIVATES SYMBOL DECODING MODULE; AND COMMENCES ACTIVATION DATA PACKET SYNTHESIS MODULE

W

UNDER C_3 CONTROL, DATA PACKET SYNTHESIS MODULE CONSTRUCTS DATA PACKET CONSISTING OF SYMBOL CHARACTER DATA, TRANSMITTER NUMBER, DATA PACKET GROUP NUMBER, CHECK CHARACTER AND FRAMING CHARACTERS

X

IS IN-RF RANGE CONFIRMATION Signal $A_5=1$?

NO

YES

NO

ARE DATA PACKET Group(s) STORED IN DATA PACKET Group BUFFER?

YES

YES

C_3 Control Module Generates Enable Signal $E_{11}=1$ Reloading Buffered Data Packet Group(s) into Data Packet Transmission Circuit

AA

Control module C_3 Generates Enable Signal $E_{10}=1$ loading currently Synthesized Data Packet Group into Data Packet Transmission Circuit

BB

11

FIG. 46C2

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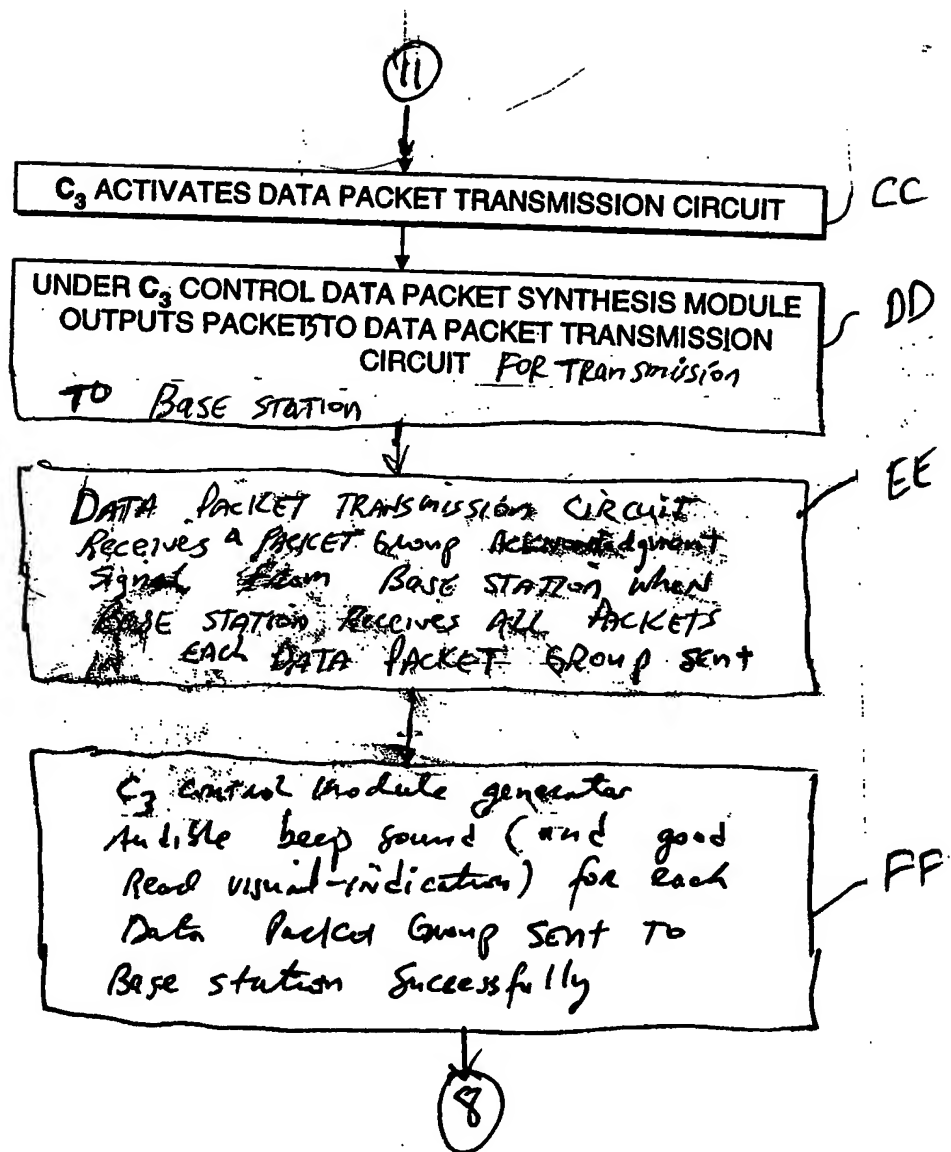


FIG. 46 C 3

GG

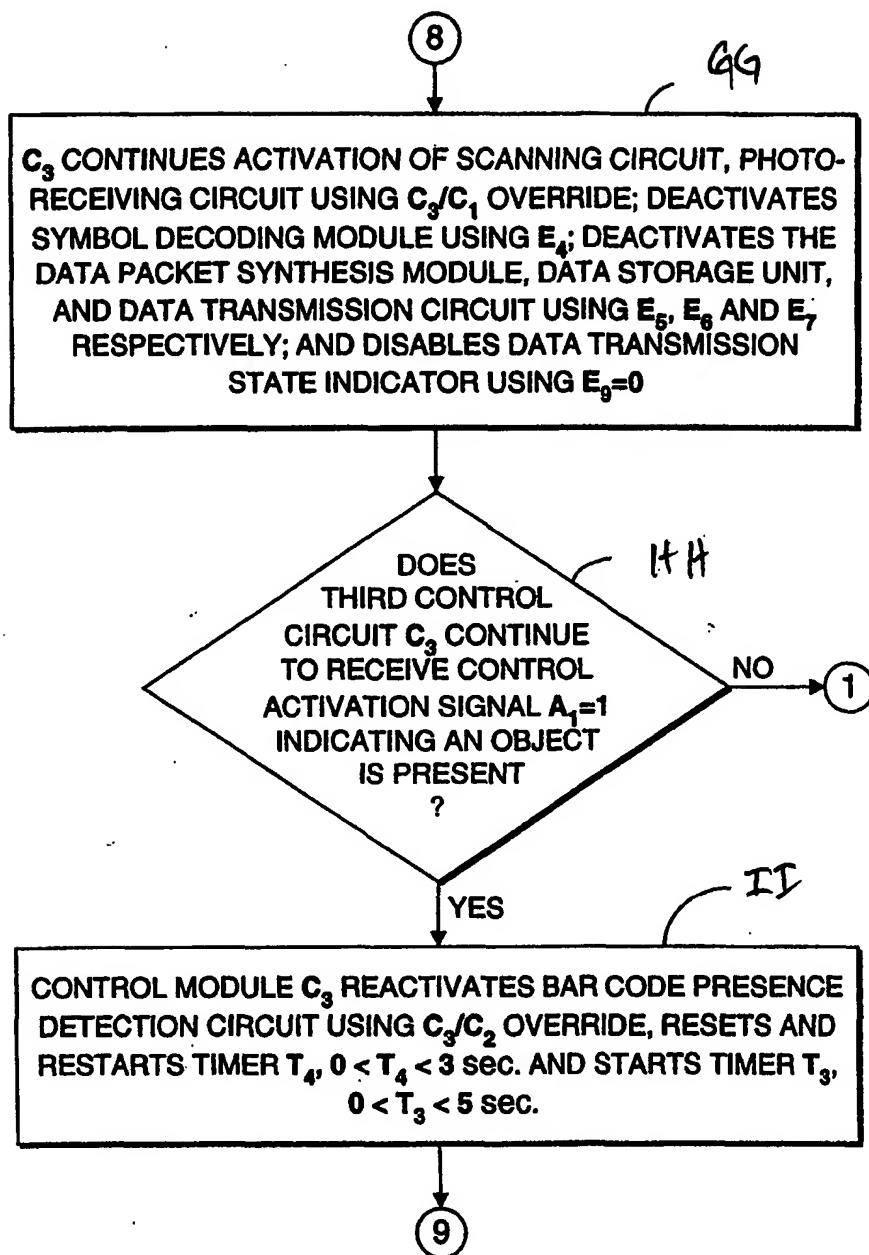


FIG 46 C4

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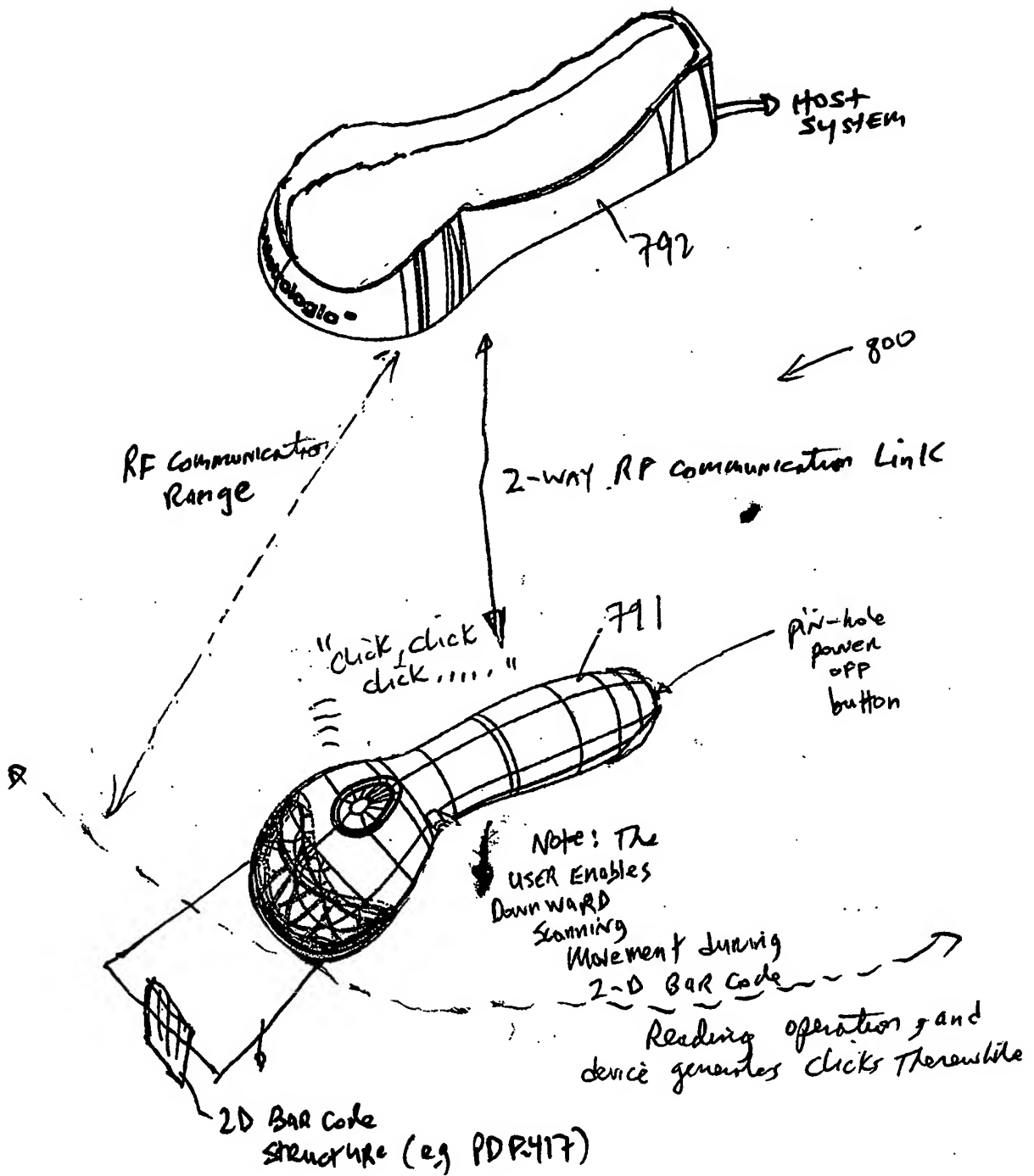
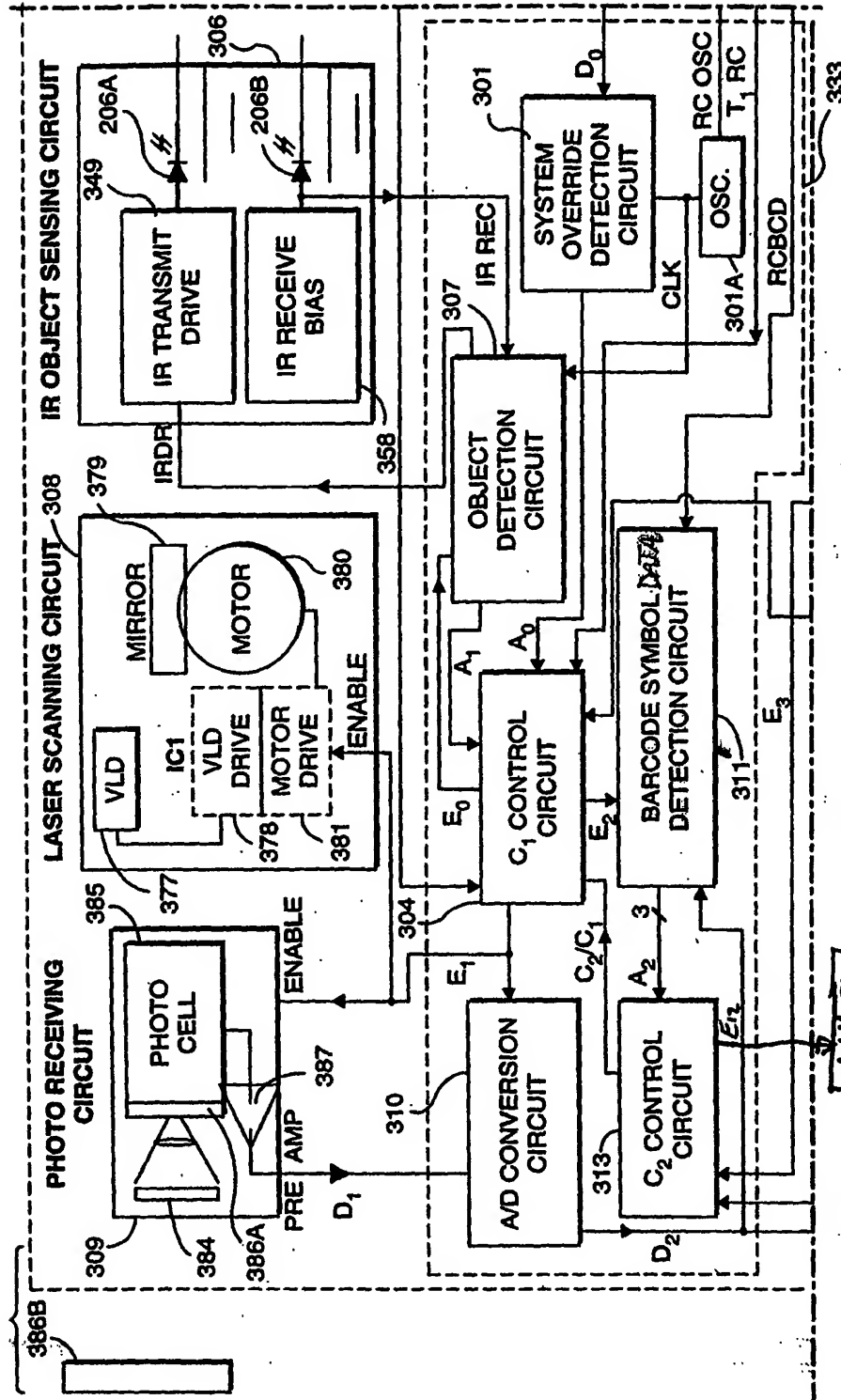


FIG. 47

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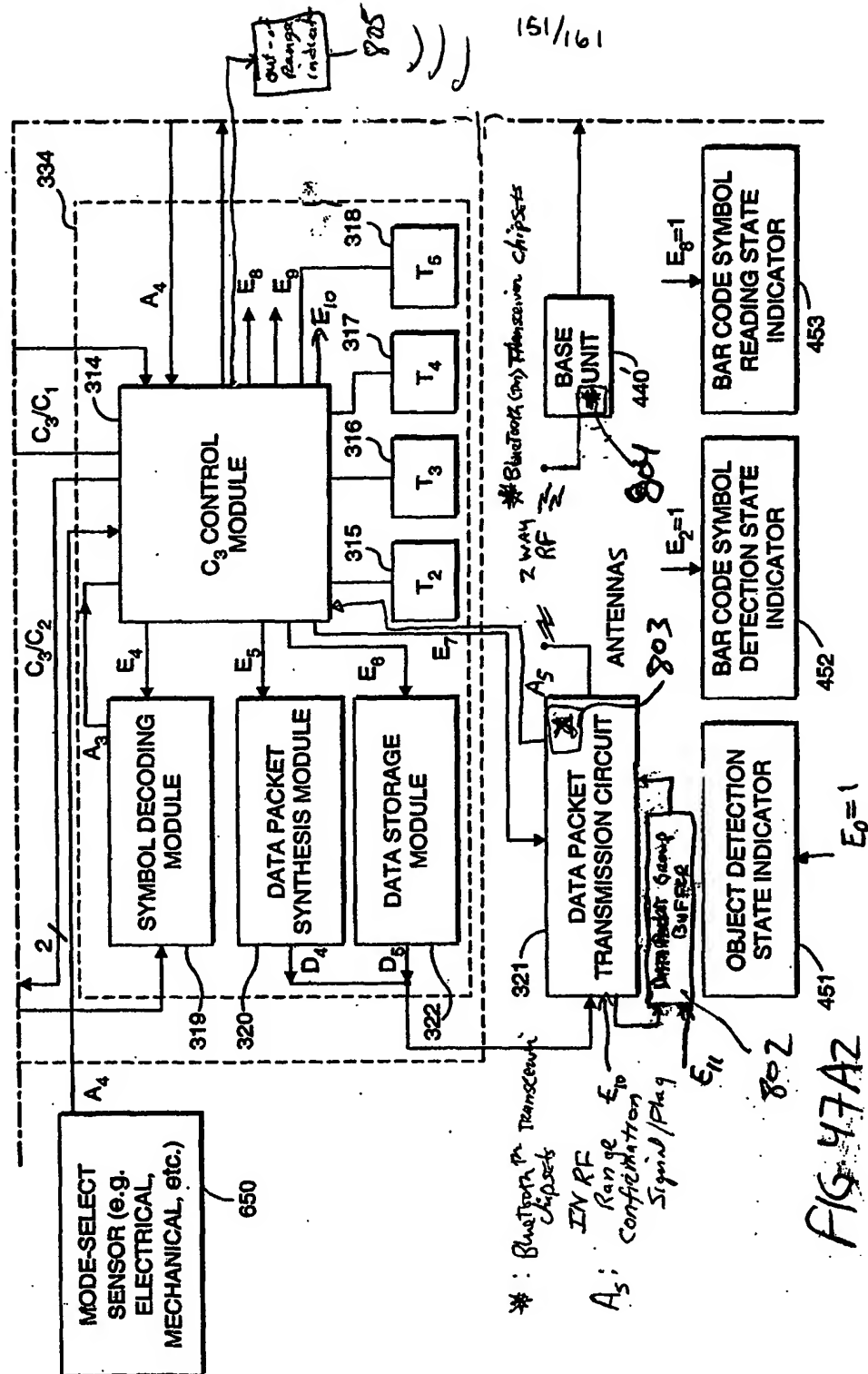
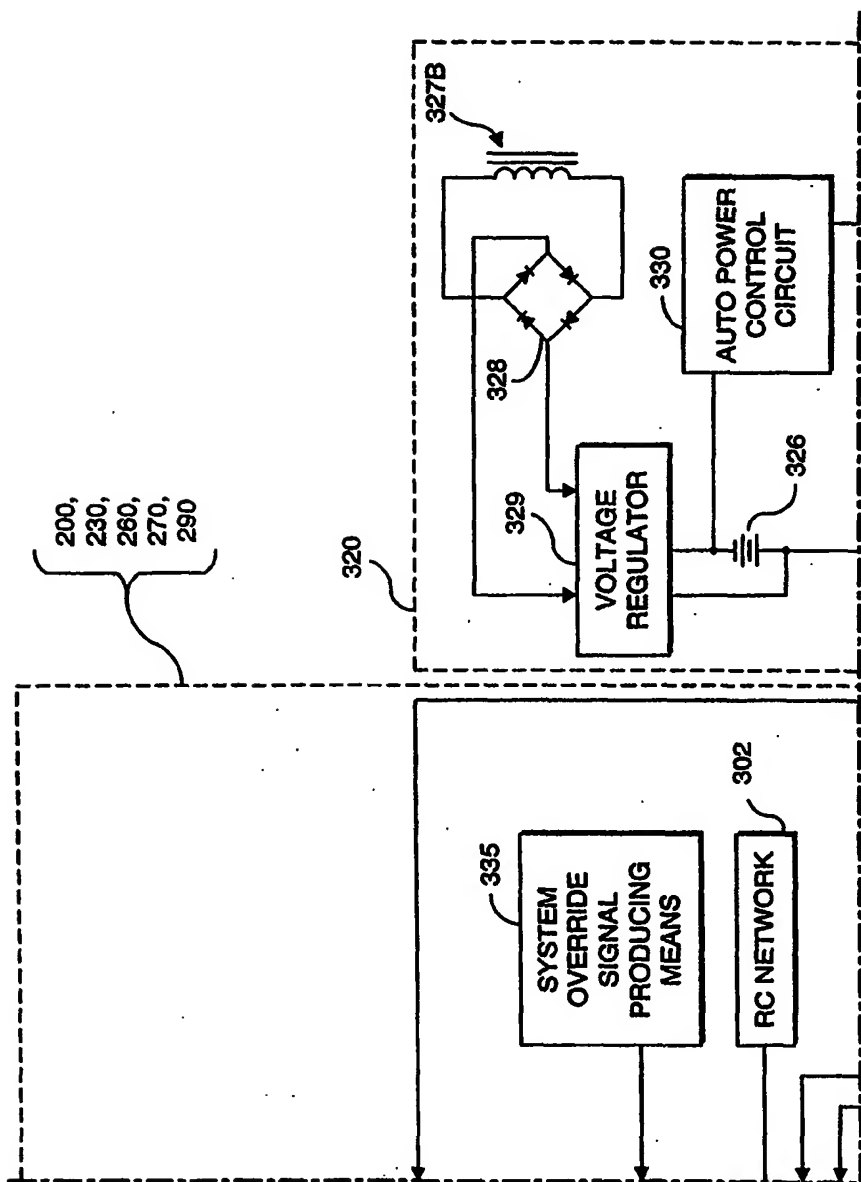


FIG. 47A2

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FIG 47A3



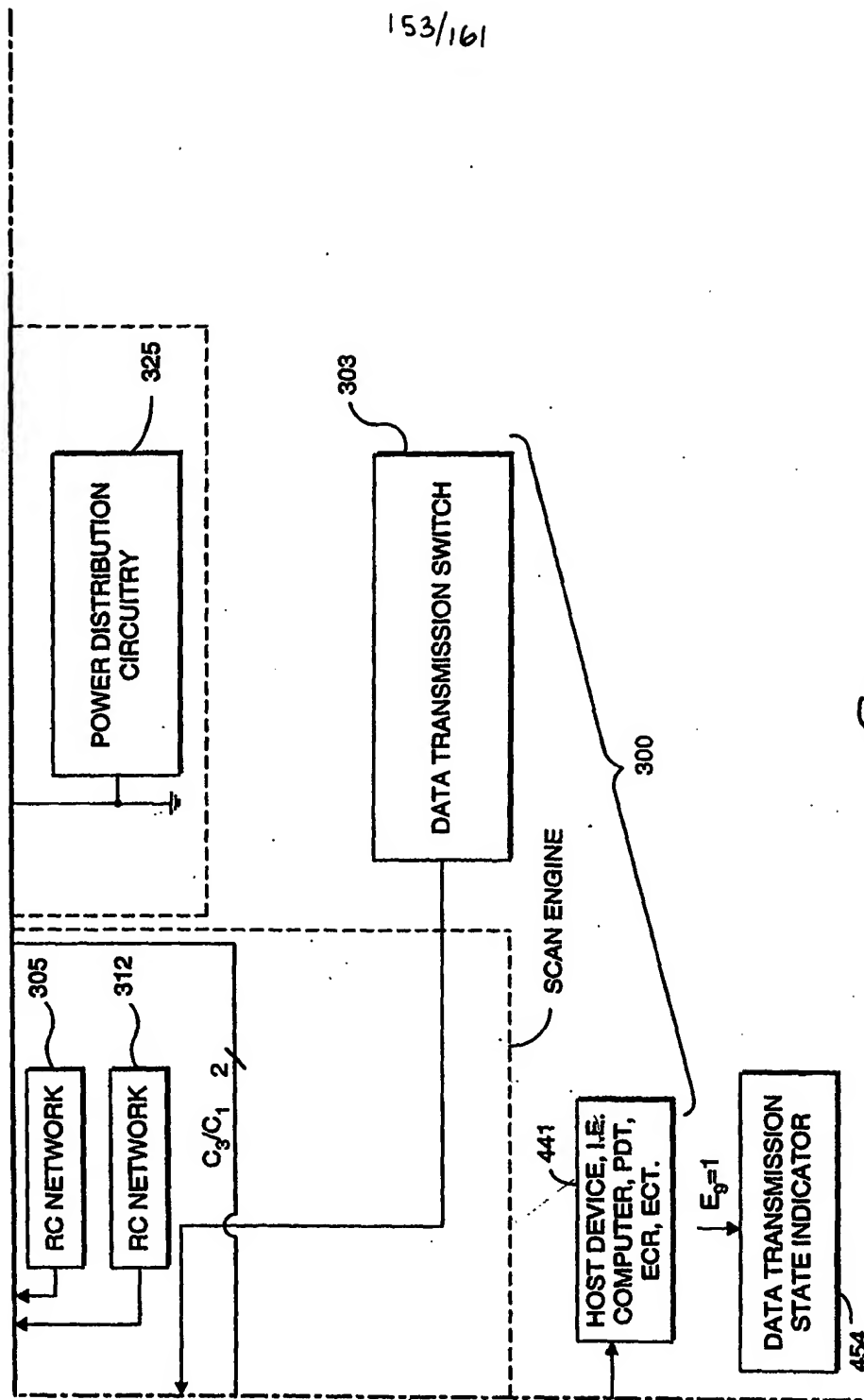
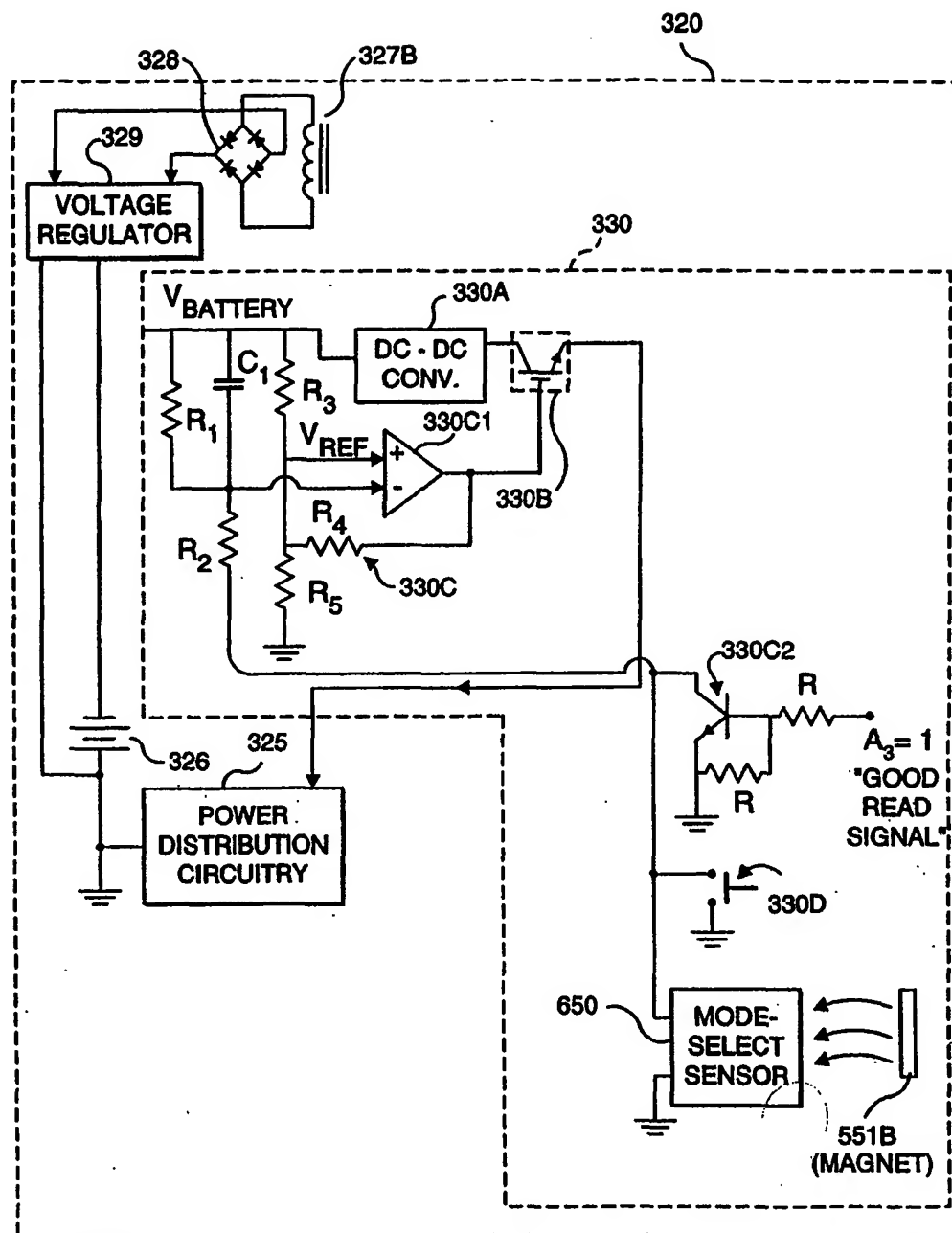


FIG. 47A4

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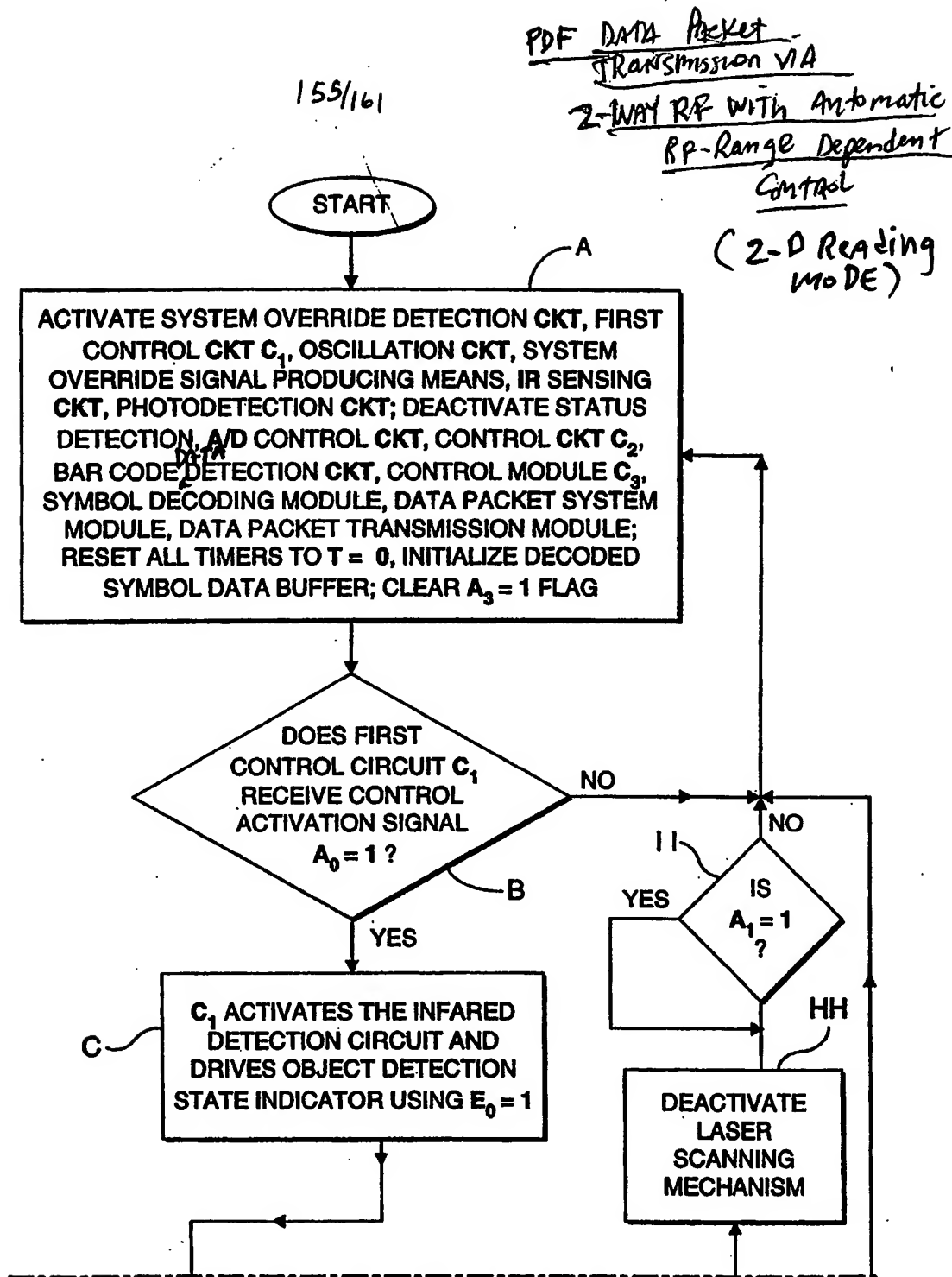
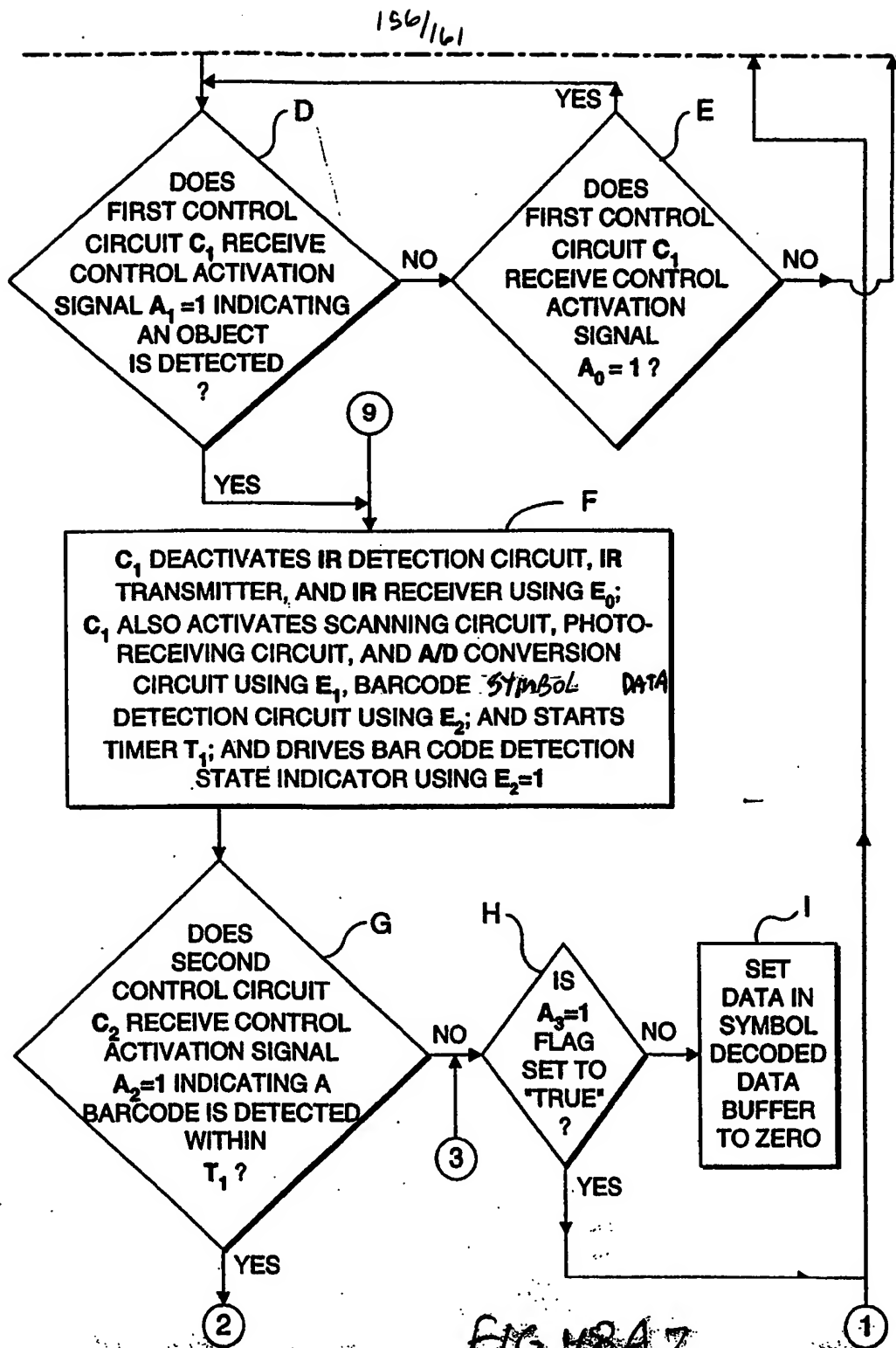
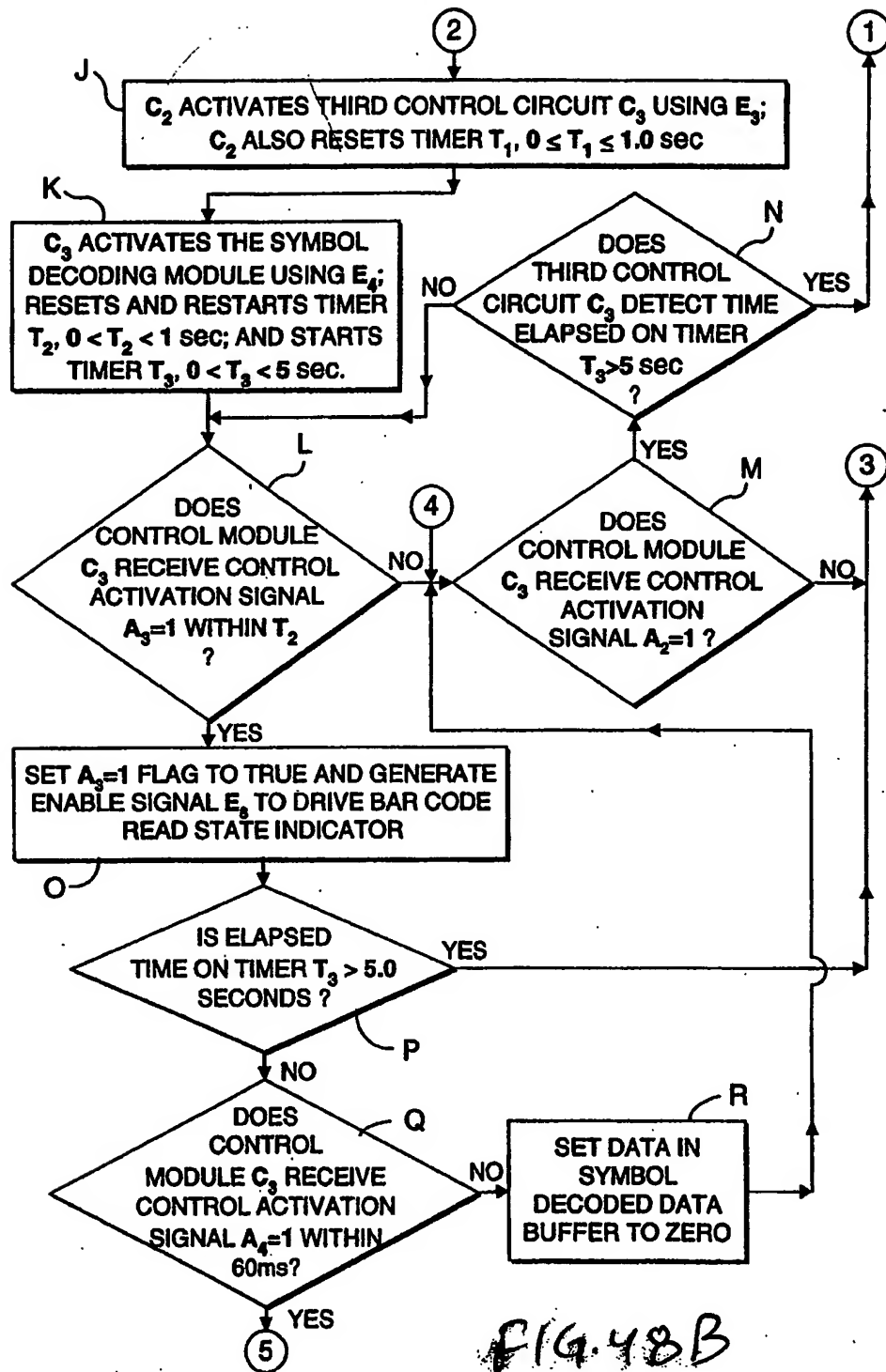


FIG. 48A1



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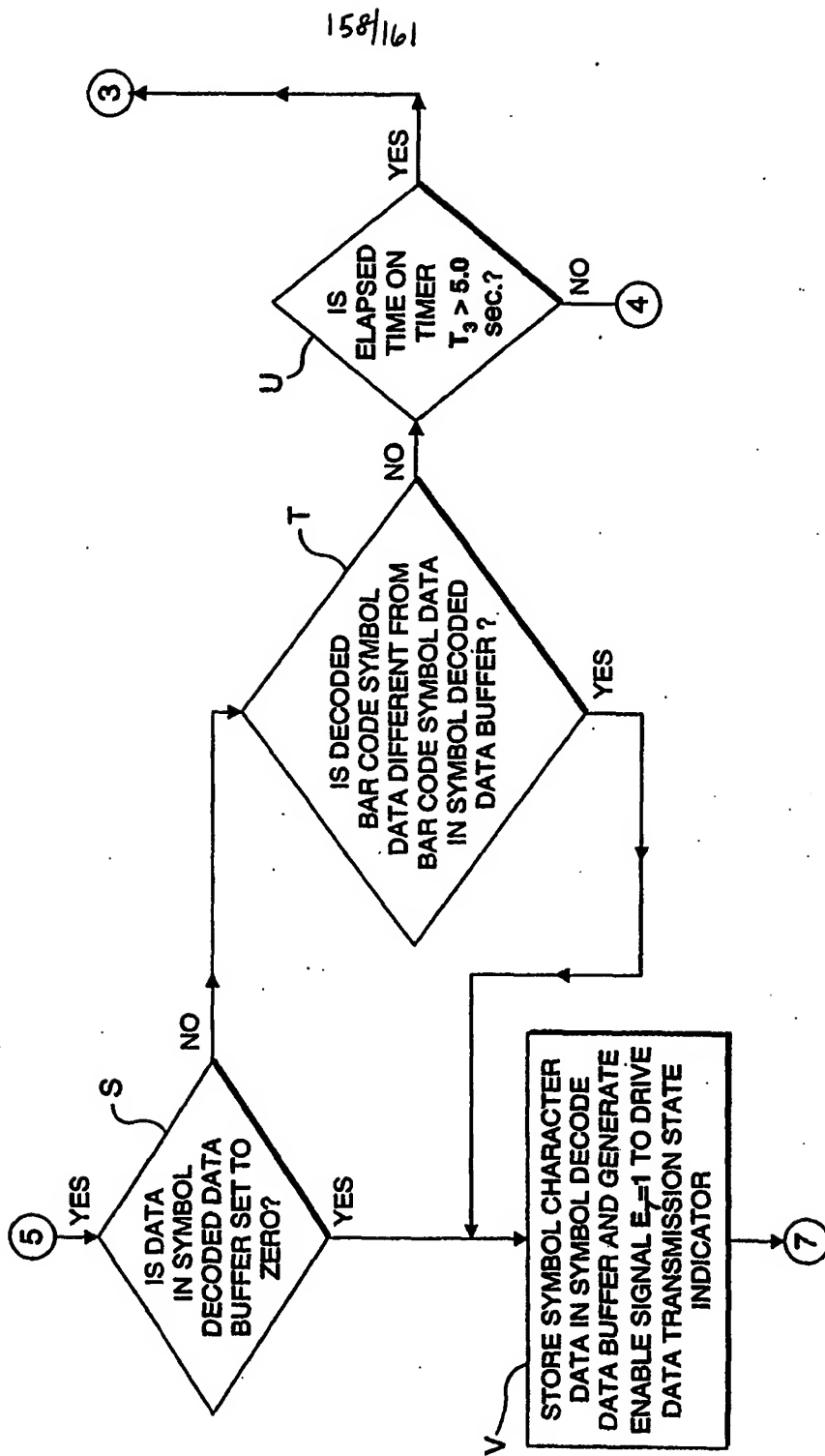


FIG. 4Bc1

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7

THIRD CONTROL CIRCUIT C_3 CONTINUES ACTIVATION OF LASER DIODE, SCANNING MOTOR, PHOTORECEIVING CIRCUIT, A/D CONVERSION CIRCUIT; DEACTIVATES SYMBOL DECODING MODULE; AND COMMENCES ACTIVATION DATA PACKET SYNTHESIS MODULE

W

UNDER C_3 CONTROL, DATA PACKET SYNTHESIS MODULE CONSTRUCTS DATA PACKET CONSISTING OF SYMBOL CHARACTER DATA, TRANSMITTER NUMBER, DATA PACKET GROUP NUMBER, CHECK CHARACTER AND FRAMING CHARACTERS

X

IS IN-RF RANGE CONFIRMATION SIGNAL $A_5=1$?

NO

YES

Y

ARE DATA PACKET GROUP(S) STORED IN DATA PACKET GROUP BUFFER?

NO

Z

YES

C_3 Control Module Generates Enable Signal $E_{11}=1$ Reloading Buffered Data Packet Group(s) into Data Packet Transmission Circuit

AA

Control module C_3 Generates Enable Signal $E_{10}=1$ loading currently Synthesized Data packet Group into Data Packet Transmission Circuit

BB

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FIG. 48CZ

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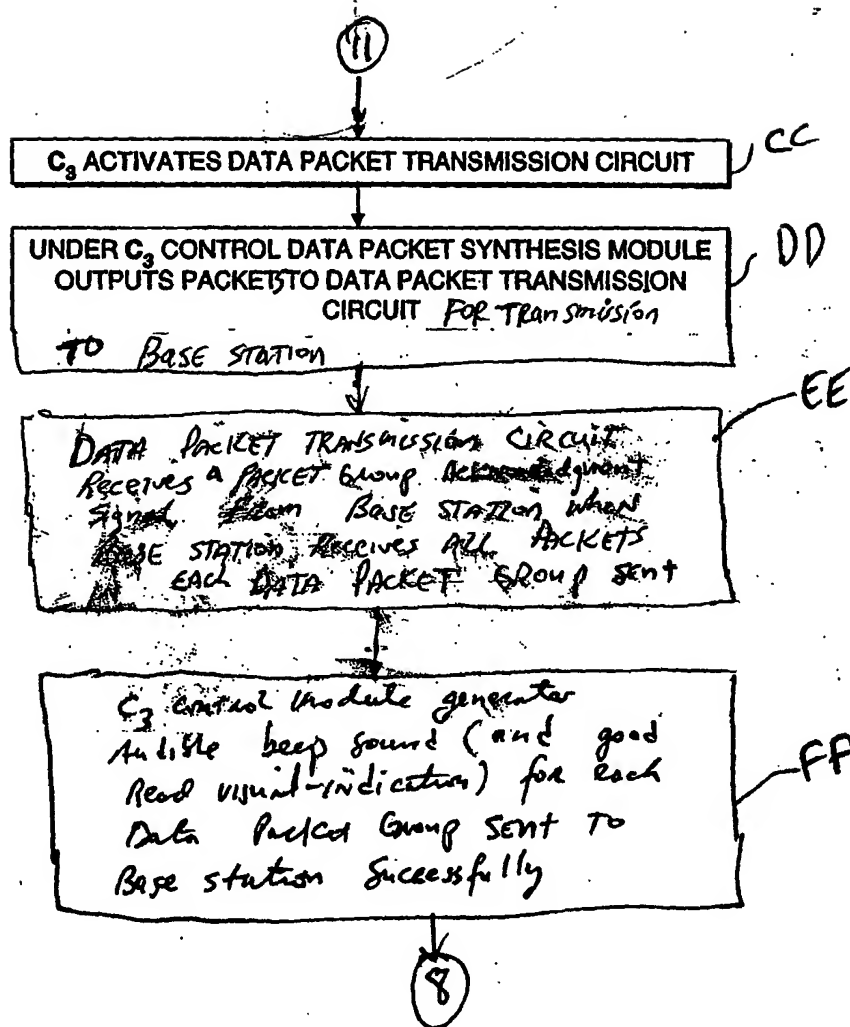


FIG. 48C3

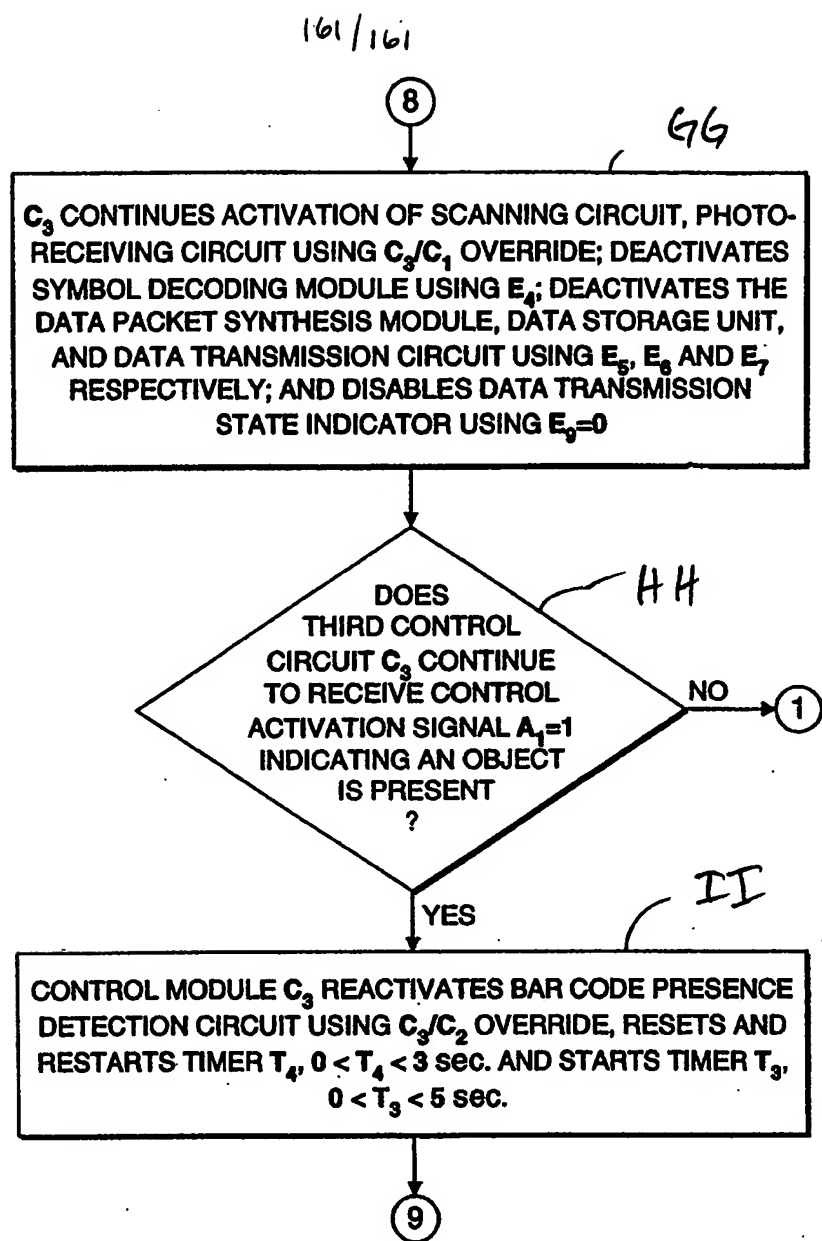


FIG. 48C4

C₃ CONTINUES ACTIVATION OF SCANNING CIRCUIT, PHOTO-RECEIVING CIRCUIT USING C₃/C₁ OVERRIDE; DEACTIVATES SYMBOL DECODING MODULE USING E₄; DEACTIVATES THE DATA PACKET SYNTHESIS MODULE, DATA STORAGE UNIT, AND DATA TRANSMISSION CIRCUIT USING E₅, E₆ AND E₇ RESPECTIVELY; AND DISABLES DATA TRANSMISSION STATE INDICATOR USING E₉=0

DOES
THIRD CONTROL
CIRCUIT C_3 CONTINUE
TO RECEIVE CONTROL
ACTIVATION SIGNAL $A_1=1$
INDICATING AN OBJECT
IS PRESENT
?

CONTROL MODULE C₃ REACTIVATES BAR CODE PRESENCE DETECTION CIRCUIT USING C₃/C₂ OVERRIDE, RESETS AND RESTARTS TIMER T₄, $0 < T_4 < 3$ sec. AND STARTS TIMER T₃, $0 < T_3 < 5$ sec.